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SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: HELEN PEZZUTO Examiner #: 70058 Date: 6/15/84
Art Unit: 1713 Phone Number: 302-1108 Serial Number: 10/775, 591
Mail Box and Bldg/Room Location: REM-10A29 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: SEE ATTACHED
Inventors (please provide full names): DEC 7

Earliest Priority Filing Date: 4/11/83

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

"Acetoacetylated" polymer having units
(a) OR (b) as defined in claim 1
(a) OR (b) polymer is made by after/post
treatment of (a) or (b) in claim 7 with
a C₁-C₁₂ alkyl acetoacetate.

Claims 1-9 under consideration

KEY WORDS

coating or paint, binder or adhesives.
THANKS!

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>K. Fuller</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>1</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: <u>1/5/85</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>40</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>45</u>	Other _____	Other (specify) _____

Batch



STIC Search Report

EIC 1700

STIC Database Tracking Number: 140760

**TO: Helen Pezzuto
Location: Rem 10A29
Art Unit : 1713
January 5, 2005**

Case Serial Number: 10/775571

**From: Kathleen Fuller
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov**

Search Notes



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28



=> file reg

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STRUCTURE FILE UPDATES: 3 JAN 2005 HIGHEST RN 807382-78-1
 DICTIONARY FILE UPDATES: 3 JAN 2005 HIGHEST RN 807382-78-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
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=> file hcaplus

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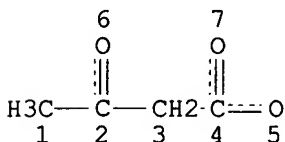
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FILE COVERS 1907 - 5 Jan 2005 VOL 142 ISS 2
 FILE LAST UPDATED: 4 Jan 2005 (20050104/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que 117

L1 STR



4,559 structures from this query

NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L2 SCR 1006 AND 484
L3 SCR 2006
L4 4559 SEA FILE=REGISTRY SSS FUL L1 AND L2 AND L3
L5 109 SEA FILE=REGISTRY ABB=ON POLYVINYL
L7 20510 SEA FILE=HCAPLUS ABB=ON L4
L8 137806 SEA FILE=HCAPLUS ABB=ON L5
L9 436 SEA FILE=HCAPLUS ABB=ON L7 AND (L8 OR POLYVINYL?)
L10 135 SEA FILE=HCAPLUS ABB=ON L9 AND COATING?/SC,SX,AB,BI
L11 120 SEA FILE=HCAPLUS ABB=ON L10 AND (COATING? OR PAINT#)
L12 32 SEA FILE=HCAPLUS ABB=ON L7(L) (L8 OR POLYVINYL?)
L13 12 SEA FILE=HCAPLUS ABB=ON L11 AND L12
L14 134 SEA FILE=HCAPLUS ABB=ON L7(L) (L8 OR POLYVINYL? OR POLY(W)VINYL
?)
L15 30 SEA FILE=HCAPLUS ABB=ON L11 AND L14
L16 30 SEA FILE=HCAPLUS ABB=ON L15 AND (COATING? OR PAINT# OR
ADHESIVE? OR BINDER?)
L17 30 SEA FILE=HCAPLUS ABB=ON L13 OR L16

=> d l17 bib abs ind hitstr 1-30

L17 ANSWER 1 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:1076503 HCAPLUS
DN 142:30086
TI Aqueous ink for thermal printing material protective layer
IN Tsugawa, Hiroaki; Oda, Shinichi
PA Nippon Kayaku Co., Ltd., Japan; Nippon Kayaku Fukuyama Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF

DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004351844	A2	20041216	JP 2003-154375	20030530
PRAI	JP 2003-154375		20030530		

AB The ink composition contains colloidal silica, higher fatty acid metal salt, hydrophobic polymer emulsion, and acetoacetylated poly(vinyl alc.).
Thermal printing material is coated with the ink composition The ink composition

shows good flowability and coatability, and the thermal printing material coated with the composition shows good head-matching property and resistance to water, plasticizer, oil, and gases.

IC ICM B41M005-26
ICS C09D011-02

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

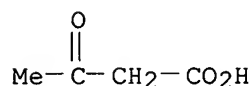
ST thermal printing material protective layer **coating** ink;
colloidal silica fatty acid metal salt **coating** ink; hydrophobic polymer **polyvinyl** alc acetoacetate protective layer

IT Thermal printing materials
(aqueous ink for thermal printing material protective layer)

IT Polyurethanes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyester-; aqueous ink for thermal printing material protective layer)
 IT 557-05-1, Zinc stearate 9003-42-3, Poly(Ethyl methacrylate)
 26634-88-8, Ethyl methacrylate-styrene copolymer **39290-68-1**,
Poly(vinyl alcohol) acetoacetate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aqueous ink for thermal printing material protective layer)
 IT 7631-86-9, Silica, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (colloidal; aqueous ink for thermal printing material protective layer)
 IT **39290-68-1**, **Poly(vinyl alcohol)** acetoacetate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aqueous ink for thermal printing material protective layer)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3

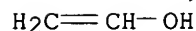


CM 2

CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

CRN 557-75-5
 CMF C2 H4 O



L17 ANSWER 2 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:1014339 HCAPLUS
 DN 141:411832
 TI Manufacture of (meth)acrylic acid polymer emulsions showing good
 mechanical stability without gelation and runaway
 IN Tanimoto, Seiji
 PA Kuraray Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 2004331785 A2 20041125 JP 2003-128690 20030507
 PRAI JP 2003-128690 20030507

AB The emulsions, useful for **adhesives, coatings, etc.**, are manufactured by emulsion polymerization of (meth)acrylate esters in the presence of active-H-containing vinyl alc. polymer dispersants and redox initiators comprising peroxides and reducing agents, where Fe compds., the (meth)acrylate esters, and the dispersants are fed in the early stage of the polymerization, and then the peroxides are continuously or intermittently fed

to the polymerization system. Thus, H2O2 was added for 3 h at 58-62° to a mixture containing SH-terminated poly(vinyl alc.), Me methacrylate, Bu acrylate,

FeCl2, and Na L-(+)-tartrate, and stirred for 1 h to give an emulsion.

IC ICM C08F002-22

ICS C08F020-00

CC 37-6 (Plastics Manufacture and Processing)

ST methacrylic emulsion manuf mech stability; iron stabilizer methacrylate ester emulsion polymn; redox initiator methacrylate ester emulsion polymn; ferrous chloride methyl methacrylate butyl acrylate emulsion polymn; mercapto terminated **polyvinyl** alc dispersant methacrylic emulsion; hydrogen peroxide sodium tartrate initiator emulsion polymn

IT Dispersing agents

(active H-containing poly(vinyl alcs.); manufacture of (meth)acrylic acid polymer emulsions showing good mech. stability without gelation and runaway)

IT Polymerization

(emulsion; manufacture of (meth)acrylic acid polymer emulsions showing good mech. stability without gelation and runaway).

IT Emulsions

(manufacture of (meth)acrylic acid polymer emulsions showing good mech. stability without gelation and runaway)

IT Peroxides, uses

RL: CAT (Catalyst use); USES (Uses)

(redox initiators; manufacture of (meth)acrylic acid polymer emulsions showing good mech. stability without gelation and runaway)

IT Polymerization catalysts

(redox; manufacture of (meth)acrylic acid polymer emulsions showing good mech. stability without gelation and runaway)

IT 9002-89-5D, Poly(vinyl alcohol), mercapto-terminated 27435-32-1D, Diacetone acrylamide-vinyl acetate copolymer, saponified **39290-68-1**

, **Poly(vinyl** alcohol) acetoacetate 80512-26-1D,

N-Vinylacetamide-vinyl acetate copolymer, saponified

RL: MOA (Modifier or additive use); USES (Uses)

(dispersant; manufacture of (meth)acrylic acid polymer emulsions showing good mech. stability without gelation and runaway)

IT 25852-37-3P, Butyl acrylate-methyl methacrylate copolymer

RL: IMF (Industrial manufacture); PREP (Preparation)

(manufacture of (meth)acrylic acid polymer emulsions showing good mech. stability without gelation and runaway)

IT 7758-94-3, Ferrous chloride

RL: MOA (Modifier or additive use); USES (Uses)

(polymerization stabilizer; manufacture of (meth)acrylic acid polymer emulsions

showing good mech. stability without gelation and runaway)

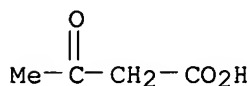
IT 87-69-4, L-(+)-Tartaric acid, uses 868-18-8, Sodium L-(+)-tartrate

7631-90-5, Sodium hydrogen sulfite 7722-84-1, Hydrogen peroxide, uses

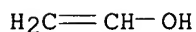
7727-21-1, Potassium persulfate

RL: CAT (Catalyst use); USES (Uses)

(redox initiator; manufacture of (meth)acrylic acid polymer emulsions showing good mech. stability without gelation and runaway)
 IT 39290-68-1, Poly(vinyl alcohol) acetoacetate
 RL: MOA (Modifier or additive use); USES (Uses)
 (dispersant; manufacture of (meth)acrylic acid polymer emulsions showing good mech. stability without gelation and runaway)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)
 CM 1
 CRN 541-50-4
 CMF C4 H6 O3



CM 2
 CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS
 CM 3
 CRN 557-75-5
 CMF C2 H4 O



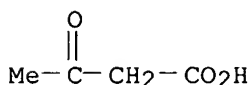
L17 ANSWER 3 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:873764 HCAPLUS
 DN 141:340473
 TI Thermal printing material with layer containing poly(vinyl alcohol) derivative and cyclic acetal
 IN Hirai, Yoshiaki
 PA Nippon Synthetic Chemical Industry Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 12 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004291519	A2	20041021	JP 2003-89505	20030328
PRAI	JP 2003-89505		20030328		
AB	The material has a coating layer containing (A) polyvinyl alc. bearing acetoacetic acid ester group and (B) cyclic acetal prepared from polyhydric alc. and dialdehyde. The layer may be a protective layer. The material shows good water and plasticizer resistance without decoloration.				
IC	ICM B41M005-26				

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 ST thermal printing material **polyvinyl** alc acetoacetate layer;
 cyclic acetal **coating** layer thermal printing material
 IT Thermal printing materials
 (thermal printing material with protective layer containing poly(vinyl alc.) derivative and cyclic acetal)
 IT **39290-68-1, Poly(vinyl alcohol) acetoacetate**
 143749-46-6, Sunrez 700M 251092-26-9, Sequarez 755
 RL: TEM (Technical or engineered material use); USES (Uses)
 (thermal printing material with protective layer containing **poly(vinyl alc.)** derivative and cyclic acetal)
 IT **39290-68-1, Poly(vinyl alcohol) acetoacetate**
 RL: TEM (Technical or engineered material use); USES (Uses)
 (thermal printing material with protective layer containing **poly(vinyl alc.)** derivative and cyclic acetal)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3



CM 2

CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

CRN 557-75-5
 CMF C2 H4 O



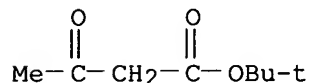
L17 ANSWER 4 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:857212 HCAPLUS
 DN 141:333694
 TI Acetoacetylated **polyvinyl** polymers and their use in **coatings**
 IN Pelosi, Lorenzo Fred; Sormani, Patricia Mary Ellen
 PA USA
 SO U.S. Pat. Appl. Publ., 18 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

applicants

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004204541	A1	20041014	US 2004-775571	20040209
	WO 2004092262	A2	20041028	WO 2004-US10708	20040407
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2003-462236P	P	20030411		
	US 2004-775571	A	20040209		
AB	The present invention relates compns. containing acetoacetylated polyvinyl polymers obtained from polyvinyl polymers, such as polyvinyl butyrals. These coating compns. are especially suitable for use as wash primers in automotive OEM and refinish coating applications.				
IC	ICM C08K003-00				
NCL	524593000				
CC	42-10 (Coatings, Inks, and Related Products)				
ST	polyvinyl butyral acetoacetylated coating adhesion				
IT	Polyvinyl butyrals				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (Butvar B90, reaction products with t-Bu acetoacetate; acetoacetylated polyvinyl polymers and their use in coatings)				
IT	Polyvinyl butyrals				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (Mowital B20H, reaction products with t-Bu acetoacetate; acetoacetylated polyvinyl polymers and their use in coatings)				
IT	Polyvinyl butyrals				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (Pioloform LL4150, reaction products with t-Bu acetoacetate; acetoacetylated polyvinyl polymers and their use in coatings)				
IT	Coating materials				
	(acetoacetylated polyvinyl polymers and their use in coatings)				
IT	Automobiles				
	(bodies, substrate; acetoacetylated polyvinyl polymers and their use in coatings)				
IT	Clothing				
	Safety devices				
	(helmets, molding; acetoacetylated polyvinyl polymers and their use in coatings)				
IT	1694-31-1DP , tert-Butyl acetoacetate, reaction products with Butvar B90 1694-31-1DP , tert-Butyl acetoacetate, reaction products with Mowital B20H 1694-31-1DP , tert-Butyl acetoacetate, reaction products with Pioloform LL4150				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				

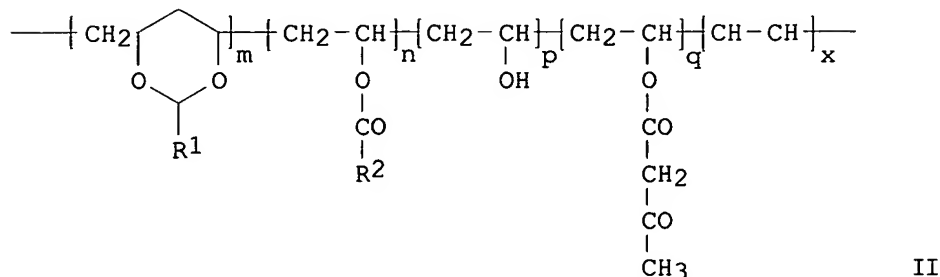
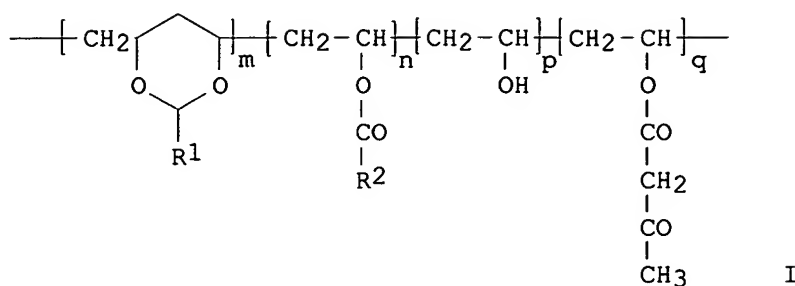
(acetoacetylated **polyvinyl** polymers and their use in coatings)

IT 1694-31-1DP, tert-Butyl acetoacetate, reaction products with Butvar B90
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acetoacetylated **polyvinyl** polymers and their use in coatings)
 RN 1694-31-1 HCAPLUS
 CN Butanoic acid, 3-oxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



L17 ANSWER 5 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:780391 HCAPLUS
 DN 141:297450
 TI Acetoacetylated **polyvinyl** polymers and curable coating compositions made therefrom
 IN Pelosi, Lorenzo Fred; Sormani, Patricia Mary Ellen
 PA USA
 SO U.S. Pat. Appl. Publ., 19 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004186217	A1	20040923	US 2004-775577	20040209
	WO 2004085535	A1	20041007	WO 2004-US8483	20040318
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2003-456476P	P	20030321		
	US 2004-775577	A	20040209		
GI					



AB Curable **coating** comps. especially suitable for use as wash primers in automotive OEM and refinish **coating** applications., contain acetoacetylated **polyvinyl** polymers obtained from **polyvinyl** polymers, such as **polyvinyl** butyrals. Such a curable composition comprises crosslinkable and crosslinking components wherein said crosslinkable component comprises: (1) an acetoacetylated **polyvinyl** polymer having formula I, wherein m ranges from about 1.5 to 85 mol percent, n ranges from about 0 to 20.5 mol percent, p ranges from about 12 to 87 mol percent and q ranges from about 1 to 88 mol percent, sum of m, n, p and q being 100 and wherein R1 and R2 are independently H, substituted or unsubstituted C1 to C12 alkyl, C6 to C14 aryl, C7 to C22 aralkyl, C6 to C14 alkaryl, or C4 to C14 carbocyclyl, or a combination thereof, said substituents being independently selected from the group consisting of C1 to C12 alkoxy, acyl, carboxyl, derivative of carboxyl, sulfonyl, derivative of sulfonyl, cyano, and halo; (2) an acetoacetylated **polyvinyl** polymer having formula II, wherein m, n, p, q are as defined above, (x) ranges from about 0.5 to about 6 mol percent, sum of m, n, p, q and x being 100 and wherein R1 and R2 are as defined above; and wherein Z is H, or --COOH and Y is --COOH, halo, unsubstituted Ph or a combination thereof; (3) a combination thereof; and wherein said crosslinking component comprises a polyamine, a polyketimine, polyepoxide, polyisocyanate, melamine, C1 to C12 alkyl dialdehyde, C1 to C12 alkyl poly(meth)acrylate, or a combination thereof.

IC ICM C08K003-00

NCL 524505000; 524548000

CC 42-10 (Coatings, Inks, and Related Products)

ST crosslinked acetoacetylated vinyl polymer wash primer automotive wash primer

IT Polyvinyl butyrals

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (Pioloform LL 145, Butvar B 90, Mowital B 30T, Mowital B 30H, Mowital B 60H, Pioloform LL 4150, reaction products with t-Bu acetoacetate; acetoacetylated **polyvinyl** polymers and curable

coating compns. made therefrom)

IT Primers (paints)
(acetoacetylated **polyvinyl** polymers and curable
coating compns. made therefrom)

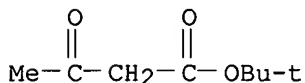
IT 1694-31-1DP, tert-Butyl acetoacetate, reaction products with
polyvinyl butyral
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(acetoacetylated **polyvinyl** polymers and curable
coating compns. made therefrom)

IT 760973-62-4, Setalux 10-1440 760973-67-9, 4975S
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent; acetoacetylated **polyvinyl** polymers and
curable coating compns. made therefrom)

IT 1694-31-1DP, tert-Butyl acetoacetate, reaction products with
polyvinyl butyral
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(acetoacetylated **polyvinyl** polymers and curable
coating compns. made therefrom)

RN 1694-31-1 HCAPLUS

CN Butanoic acid, 3-oxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



L17 ANSWER 6 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:719848 HCAPLUS

DN 141:227109

TI Ink-jet recording layer composition

IN Mandai, Shusaku; Hirai, Yoshiaki

PA The Nippon Synthetic Chemical Industry Co. Ltd., Japan

SO Ger. Offen., 11 pp.
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	DE 102004008360	A1	20040902	DE 2004-102004008360	20040220
	JP 2004268576	A2	20040930	JP 2004-43860	20040220
	JP 2004268577	A2	20040930	JP 2004-43861	20040220
	US 2004209014	A1	20041021	US 2004-783947	20040220
PRAI	JP 2003-43771	A	20030221		
	JP 2003-43772	A	20030221		

AB A composition for receiving layer (for ink-jet recording sheets) consisting of
(A) **polyvinyl** alc. containing acetoacetate groups (prepared by
reacting of **polyvinyl** alc. with diketene), (B) zirconium compds.
and (C) an inorg. powder has a good surface stability, water resistance
and good resistance to smearing. Thus, a composition containing 100 weight
parts of
polyvinyl alc. (with polymerization degree 2300 and acetylacetate groups
content 4.8 mol.%) and 333 weight parts of SiO₂ (Finesil) in 2400 parts of
water is mixed with an aqueous solution of zirconyl hydroxychloride and
polyamine-based fixing agent and is coated onto cellulose-free paper. The

resulting receiving layer exhibits (after 10 min drying at 105°) an excellent surface stability compared with the same layer composition without Zr derivs.

IC ICM B41M005-00

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 74

ST ink receiving layer **polyvinyl** alc acetoacetate zirconium compd;
inorg powder ink receiving layer; recording sheet ink jet; zirconyl
hydroxychloride silica **polyvinyl** alc acetoacetate
coating layer; improved surface stability water resistance
smearing resistance

IT Polyamines

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(ink-jet receiving layer composition consisting of **polyvinyl** alc.
containing acetoacetate groups, zirconium compds. and an inorg. powder)

IT Ink-jet recording sheets

(paper; ink-jet receiving layer composition consisting of **polyvinyl**
alc. containing acetoacetate groups, zirconium compds. and an inorg.
powder)

IT Paper

(printing, ink-jet; ink-jet receiving layer composition consisting of
polyvinyl alc. containing acetoacetate groups, zirconium compds.
and an inorg. powder)

IT 7631-86-9, Silica, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(amorphous, Finesil; ink-jet receiving layer composition consisting of
polyvinyl alc. containing acetoacetate groups, zirconium compds.
and an inorg. powder)

IT 202289-86-9, Sumiresin SR 1001

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(fixing agent; ink-jet receiving layer composition consisting of
polyvinyl alc. containing acetoacetate groups, zirconium compds.
and an inorg. powder)

IT 13746-89-9, Zirconium nitrate 13826-66-9, Zirconyl nitrate 18428-88-1,
Zirconyl hydroxychloride

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(ink-jet receiving layer composition consisting of **polyvinyl** alc.
containing acetoacetate groups, zirconium compds. and an inorg. powder)

IT 39290-68-1, **Poly(vinyl** alcohol) acetoacetate

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(ink-jet receiving layer composition consisting of **polyvinyl** alc.
containing acetoacetate groups, zirconium compds. and an inorg. powder)

IT 39290-68-1, **Poly(vinyl** alcohol) acetoacetate

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(ink-jet receiving layer composition consisting of **polyvinyl** alc.
containing acetoacetate groups, zirconium compds. and an inorg. powder)

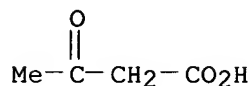
RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3

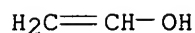


CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

CRN 557-75-5
CMF C2 H4 O



L17 ANSWER 7 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:411626 HCAPLUS

DN 140:408334

TI Gas-barrier **coating** compositions and durable gas-barrier films therefrom

IN Morinaka, Yuriko; Hagio, Yumiko; Fukushima, Yoichi

PA Kyodo Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004143197	A2	20040520	JP 2002-306557	20021022
PRAI	JP 2002-306557		20021022		

AB Title compns. contain acetoacetyl-modified poly(vinyl alc.), alkoxysilanes $\text{R}_1\text{nSi}(\text{OR}_2)_4-\text{n}$ ($\text{R}_1, \text{R}_2 = \text{C}_1-3$ alkyl; $\text{n} = 0-3$), acid catalysts, and (low alc.-added) water. An E 5100 film was coated with a composition comprising Gohsefimer Z 200, Poval, KBE 04, HOAc, Iso-PrOH, and H₂O and baked at 80° to form a film showing good adhesion between the E 5100 and **coating** initially and after 1 wk at 40° and 90% relative humidity (RH), gas barrier ability <1 mL/m²-atm-day at 23° and 0% RH and 2.0 mL/m²-atm-day at 23° and 65% RH.

IC ICM C09D129-04

ICS B32B027-30; B32B027-36; C08J007-04; C09D183-02; C09D183-04; C08L067-00

CC 42-10 (Coatings, Inks, and Related Products)

ST gas barrier **coating** acetoacetyl **polyvinyl alc** alkoxysilane acid catalyst; moisture resistance gas barrier adhesion aq **coating** compn

IT Acids, uses

RL: CAT (Catalyst use); USES (Uses)

(acetoacetyl poly(vinyl alc.)-, alkoxysilane-, acid catalyst-containing aqueous

gas-barrier **coatings** with long-lasting ability)

IT Silanes
 RL: TEM (Technical or engineered material use); USES (Uses)
 (alkoxy; acetoacetyl poly(vinyl alc.)-, alkoxyasilane-, acid
 catalyst-containing aqueous gas-barrier **coatings** with long-lasting
 ability)

IT Polyesters, miscellaneous
 RL: MSC (Miscellaneous)
 (film base; acetoacetyl poly(vinyl alc.)-, alkoxyasilane-, acid
 catalyst-containing aqueous gas-barrier **coatings** with long-lasting
 ability)

IT **Coating materials**
 (gas-impermeable; acetoacetyl poly(vinyl alc.)-, alkoxyasilane-, acid
 catalyst-containing aqueous gas-barrier **coatings** with long-lasting
 ability)

IT 64-19-7, Acetic acid, uses
 RL: CAT (Catalyst use); USES (Uses)
 (acetoacetyl poly(vinyl alc.)-, alkoxyasilane-, acid catalyst-containing
 aqueous
 gas-barrier **coatings** with long-lasting ability)

IT 9002-89-5, Poval **39290-68-1**, Gohsefimer Z 200
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (acetoacetyl **poly(vinyl alc.)**-, alkoxyasilane-, acid
 catalyst-containing aqueous gas-barrier **coatings** with long-lasting
 ability)

IT 78-10-4, KBE 04
 RL: TEM (Technical or engineered material use); USES (Uses)
 (acetoacetyl poly(vinyl alc.)-, alkoxyasilane-, acid catalyst-containing
 aqueous
 gas-barrier **coatings** with long-lasting ability)

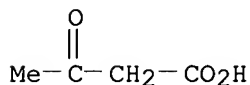
IT 25038-59-9, Toyobo ester film E 5100, miscellaneous
 RL: MSC (Miscellaneous)
 (film base; acetoacetyl poly(vinyl alc.)-, alkoxyasilane-, acid
 catalyst-containing aqueous gas-barrier **coatings** with long-lasting
 ability)

IT **39290-68-1**, Gohsefimer Z 200
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (acetoacetyl **poly(vinyl alc.)**-, alkoxyasilane-, acid
 catalyst-containing aqueous gas-barrier **coatings** with long-lasting
 ability)

RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3



CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

CRN 557-75-5
CMF C2 H4 O

H₂C=CH-OH

L17 ANSWER 8 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:307554 HCAPLUS

DN 140:312072

TI Ink-jet recording materials with no cracking and excellent ink absorption and method for their manufacture

IN Yokota, Yasuaki; Arai, Katsuaki

PA Mitsubishi Paper Mills, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004114457	A2	20040415	JP 2002-279898	20020925
PRAI	JP 2002-279898		20020925		

AB The materials have ≥1 ink-receiving layers, including the layers formed by applying **coatings** containing inorg. microfine particles, acetoacetyl-modified vinyl alc. polymers, and Zr compds. and drying them under cooling so as to increase the viscosity.

IC ICM B41M005-00

ICS B05D005-04; B41J002-01

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST ink jet recording material cracking prevention; alumina microparticle **coating** PET ink absorption; acetoacetyl **polyvinyl** alc zirconium ink receiver

IT Microparticles

(cationic; manufacture of ink-jet recording materials having ink-receiving layers containing inorg. microparticles, acetoacetyl-modified **polyvinyl** alc., and Zr compds. with no cracking and good ink absorption)

IT Ink-jet recording sheets

(manufacture of ink-jet recording materials having ink-receiving layers containing inorg. microparticles, acetoacetyl-modified **polyvinyl** alc., and Zr compds. with no cracking and good ink absorption)

IT Polyesters, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(substrate film; manufacture of ink-jet recording materials having ink-receiving layers containing inorg. microparticles, acetoacetyl-modified **polyvinyl** alc., and Zr compds. with no cracking and good ink absorption)

IT 7631-86-9, Colloidal silica, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(colloidal, cation-modified, microparticles; manufacture of ink-jet

recording materials having ink-receiving layers containing inorg. microparticles, acetoacetyl-modified **polyvinyl** alc., and Zr compds. with no cracking and good ink absorption)

IT 5153-24-2, Zirconyl acetate 7699-43-6, Zirconyl chloride 9002-89-5D, Poly(vinyl alcohol), acetoacetyl-modified 13826-66-9, Zirconyl nitrate 18428-88-1, Zirconyl hydroxychloride **39290-68-1**, Gohsefimer Z 200

RL: TEM (Technical or engineered material use); USES (Uses)
(manufacture of ink-jet recording materials having ink-receiving layers containing inorg. microparticles, acetoacetyl-modified **polyvinyl** alc., and Zr compds. with no cracking and good ink absorption)

IT 1344-28-1, Alumina, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(microparticles; manufacture of ink-jet recording materials having ink-receiving layers containing inorg. microparticles, acetoacetyl-modified **polyvinyl** alc., and Zr compds. with no cracking and good ink absorption)

IT 25038-59-9, Poly(ethylene terephthalate), uses

RL: TEM (Technical or engineered material use); USES (Uses)
(substrate film; manufacture of ink-jet recording materials having ink-receiving layers containing inorg. microparticles, acetoacetyl-modified **polyvinyl** alc., and Zr compds. with no cracking and good ink absorption)

IT 9002-89-5, PVA 117

RL: TEM (Technical or engineered material use); USES (Uses)
(undercoat; manufacture of ink-jet recording materials having ink-receiving layers containing inorg. microparticles, acetoacetyl-modified **polyvinyl** alc., and Zr compds. with no cracking and good ink absorption)

IT **39290-68-1**, Gohsefimer Z 200

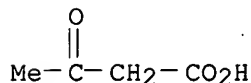
RL: TEM (Technical or engineered material use); USES (Uses)
(manufacture of ink-jet recording materials having ink-receiving layers containing inorg. microparticles, acetoacetyl-modified **polyvinyl** alc., and Zr compds. with no cracking and good ink absorption)

RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
CMF C4 H6 O3

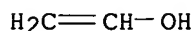


CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

CRN 557-75-5
CMF C2 H4 O



L17 ANSWER 9 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:218817 HCAPLUS

DN 140:255076

TI Water-resistant poly(vinyl alcohol) compositions forming aqueous solutions with stable viscosity and their uses

IN Bandai, Shusaku; Hirai, Yoshiaki

PA Nippon Synthetic Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004083756	A2	20040318	JP 2002-247149	20020827
PRAI	JP 2002-247149		20020827		

AB The comps. comprise poly(vinyl alc.) (PVA) acetoacetate and weak salts of amines. The amines may be represented by $\text{R}[(\text{CH}_2)_n\text{NHR}_1]_m$ (R = aromatic, alicyclic, or heterocyclic ring; $\text{R}_1 = \text{H}$, alkyl; $n \geq 0$; $m > 0$). The comps. form protective layers, printing layers of thermal printing sheets (also claimed), or ink-receiving layers of ink-jet printing receptors (also claimed). Further claimed are **adhesives** containing the comps. Thus, an aqueous composition of PVA acetoacetate (d.s. 99.1 mol%; average d.p.

1200), MXDA (m-xylylenediamine) hydrogen carbonate, and kaolin clay was applied on a printing layer of thermal printing sheet to form a protective layer with good water resistance. The composition showed little increase of viscosity in 1-mo storage.

IC ICM C08L029-04

ICS B41J002-01; B41M005-00; B41M005-26; C08F008-00; C08F216-06; C08F218-10; C08K005-17; C09J129-04

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38, 74

ST **polyvinyl** alc amine carbonate viscosity stability; PVA acetoacetate water resistance **adhesive coating**; thermal ink jet printing **coating** PVA viscosity

IT Crosslinking agents

(latent, weak salts of amines; water-resistant PVA comps. containing weak salts of amines and forming aqueous **coatings/adhesives** with stable viscosity)

IT Thermal printing materials

(sheets; water-resistant PVA comps. containing weak salts of amines and forming aqueous **coatings/adhesives** with stable viscosity)

IT Ink-jet recording sheets

(water-resistant PVA comps. containing weak salts of amines and forming aqueous **coatings/adhesives** with stable viscosity)

IT **Adhesives**

(water-resistant, aqueous; water-resistant PVA comps. containing weak salts of

amines and forming aqueous **coatings/adhesives** with stable viscosity)

IT **Coating materials**

(water-resistant, water-thinned; water-resistant PVA compns. containing weak salts of amines and forming aqueous **coatings/adhesives** with stable viscosity)

IT 669730-27-2P
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (crosslinking agents; water-resistant PVA compns. containing weak salts of amines and forming aqueous **coatings/adhesives** with stable viscosity)

IT 1477-55-0D, m-Xylylenediamine, weak salts 2579-20-6D,
 1,3-Bis(aminomethyl)cyclohexane, weak salts 232600-99-6D,
 Norbornanediamine, weak salts
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (crosslinking agents; water-resistant PVA compns. containing weak salts of amines and forming aqueous **coatings/adhesives** with stable viscosity)

IT 669762-35-0P, MXDA hydrogen carbonate polymer with **poly(vinyl alcohol) acetoacetate**
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (water-resistant PVA compns. containing weak salts of amines and forming aqueous **coatings/adhesives** with stable viscosity)

IT 39290-68-1, **Poly(vinyl alcohol) acetoacetate**
 RL: TEM (Technical or engineered material use); USES (Uses)
 (water-resistant PVA compns. containing weak salts of amines and forming aqueous **coatings/adhesives** with stable viscosity)

IT 669762-35-0P, MXDA hydrogen carbonate polymer with **poly(vinyl alcohol) acetoacetate**
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (water-resistant PVA compns. containing weak salts of amines and forming aqueous **coatings/adhesives** with stable viscosity)

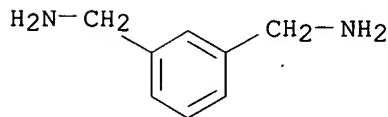
RN 669762-35-0 HCAPLUS
 CN Carbonic acid, compd. with 1,3-benzenedimethanamine (2:1), polymer with ethenol homopolymer 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 669730-27-2
 CMF C8 H12 N2 . 2 C H2 O3

CM 2

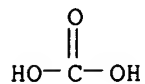
CRN 1477-55-0
 CMF C8 H12 N2



CM 3

CRN 463-79-6

CMF C H2 O3



CM 4

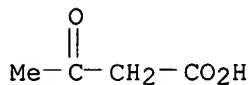
CRN 39290-68-1

CMF C4 H6 O3 . x (C2 H4 O)x

CM 5

CRN 541-50-4

CMF C4 H6 O3



CM 6

CRN 9002-89-5

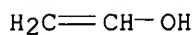
CMF (C2 H4 O)x

CCI PMS

CM 7

CRN 557-75-5

CMF C2 H4 O



IT 39290-68-1, Poly(vinyl alcohol) acetoacetate

RL: TEM (Technical or engineered material use); USES (Uses)

(water-resistant PVA compns. containing weak salts of amines and forming aqueous **coatings/adhesives** with stable viscosity)

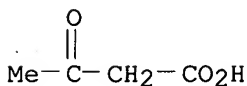
RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

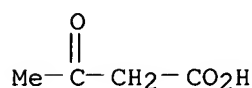
CM 3

CRN 557-75-5
CMF C2 H4 O

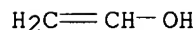
H₂C=CH-OH

L17 ANSWER 10 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:192721 HCAPLUS
DN 141:396870
TI **Polyvinyl** alcohol applied for the Ink Jet silica **binder**
-application of crosslinkable PVA "Gohsefimer Z"
AU Mandai, Shusaku; Hirai, Yoshiaki
CS Central Research Laboratory, Gohsenol Laboratory; The Nippon Synthetic
Chemical Industry Co., Ltd., Japan
SO Kami Parupu Gijutsu Kyokai, Nenji Taikai Koen Yoshishu (2003) 621-631
CODEN: NTKKFN
PB Kami Parupu Gijutsu Kyokai
DT Journal
LA Japanese
AB Application of Gohsefimer Z (acetoacetyl group modified PVA) as silica
pigment **binder** for the porous-type absorption layer of IJ media
was investigated. Applied with proper crosslinking agents, Gohsefimer Z
exhibited excellent silica-binding strength, which can prevent silica
dusting even when small amount of PVA was used. For example, the
coating layer of IJ media combined of Gohsefimer Z and Zirconium
compound or Adipic dihydrazide(ADH) showed larger silica binding strength
than that of other PVA. Moreover the viscosity of the **coating**
mixture consisted of Gohsefimer Z and Zirconium compound or ADH did not show
abrupt increase. These results suggests that Gohsefimer Z based systems
are promising as the **binder** for the porous type IJ media.
CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): 43
ST **polyvinyl** alc ink jet silica **binder** crosslinking
IT Adhesion, physical
(peel strength; **polyvinyl** alc. applied for ink jet silica
binder)
IT **Binders**
Coating materials
Crosslinking agents
Glass transition temperature
Storage modulus
Viscosity
(**polyvinyl** alc. applied for ink jet silica **binder**)
IT 1071-93-8, Adipic dihydrazide 4229-34-9, Zirconium acetate 10119-31-0,
Zirconium hydroxy chloride 13746-89-9, Zirconium nitrate 14644-61-2
22829-17-0, Zirconium ammonium carbonate
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinker; **polyvinyl** alc. applied for ink jet silica

binder)
 IT 7631-86-9, Silica, uses 39290-68-1, Gohsefimer Z
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyvinyl alc. applied for ink jet silica binder)
 IT 39290-68-1, Gohsefimer Z
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyvinyl alc. applied for ink jet silica binder)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)
 CM 1
 CRN 541-50-4
 CMF C4 H6 O3



CM 2
 CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS
 CM 3
 CRN 557-75-5
 CMF C2 H4 O



L17 ANSWER 11 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2003:771402 HCAPLUS
 DN 139:278077
 TI Gas barrier **coating** composition and manufacturing
coating and packaging
 IN Shiho, Hiroshi; Kawahara, Kouji; Ishikawa, Satoshi; Kanamori, Tarou;
 Nishikawa, Akira
 PA JSR Corporation, Japan
 SO Eur. Pat. Appl., 5 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1348747	A1	20031001	EP 2003-6957	20030326
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2003187113	A1	20031002	US 2003-396518	20030326
	JP 2004002751	A2	20040108	JP 2003-84542	20030326
PRAI	JP 2002-88715	A	20020327		

- AB A gas barrier **coating** composition comprises (a) a **polyvinyl** alc., (b) a metal alcoholate $R_1mM(OR_2)_n$ ($M = Ti, Zr, \text{ or } Al$; $R_1 = Cl-8$ organic group, $R_2 = Cl-5$ alkyl, $Cl-6$ acyl, or Ph ; and m and $n \geq 0$, with $m + n$ representing the valence of M), a hydrolyzate, condensate, or chelate compound of the metal alcoholate, a hydrolyzate or condensate of the metal chelate compound, a metal acylate $R_1mM(OR_2)_n$, a hydrolyzate or condensate of the metal acylate, and (c) an organosilane $R_3pSi(OR_4)_4-p$ ($R_3 = Cl-8$ organic group; $R_4 = Cl-5$ alkyl, $Cl-6$ acyl, or Ph ; $p = 0-2$), a hydrolyzate or condensate of the organosilane. The composition can produce a **coating** exhibiting very small O permeability under high humidity conditions, exhibiting superior adhesion to substrates, being nontoxic to humans, and useful as a packaging material for medical supplies, foods, cosmetics, cigarettes, and toiletries. The substrates may have a layer of oxide vapor deposition film. A base laminate film of biaxially-stretched nylon was coated with a vapor deposition layer of SiO_2 , a vapor deposition layer of Al_2O_3 , and gas barrier **coating** composition featuring Soarnol D 2908, 0.2 part tetraethoxysilane hydrolyzate, and 2 parts titanium acetylacetonate hydrolyzate. The oxygen permeability of the laminated product at 23° and 90% relative humidity was $0.4 \text{ cm}^3/\text{m}^2\text{-atm-24 h}$ and the water vapor permeability at 38° and 100% relative humidity was $0.5 \text{ g}/\text{m}^2\text{-atm-24 h}$.
- IC ICM C09D183-10
ICS C08G077-442; C08G077-58; C08K005-057; C08K005-09
- CC 42-10 (**Coatings**, Inks, and Related Products)
- ST gas barrier **polyvinyl** alc organometal **coating**; metal alcoholate acylate organosilane gas barrier **coating**
- IT Polyamides, uses
Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(base film; gas barrier **coating** composition of **polyvinyl** alc. **binder**, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)
- IT **Coating** materials
(gas-impermeable; gas barrier **coating** composition of **polyvinyl** alc. **binder**, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)
- IT 9003-07-0, PP
RL: TEM (Technical or engineered material use); USES (Uses)
(base film, GH-I; gas barrier **coating** composition of **polyvinyl** alc. **binder**, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)
- IT 25038-59-9, Poly(ethylene terephthalate), uses
RL: TEM (Technical or engineered material use); USES (Uses)
(base film; gas barrier **coating** composition of **polyvinyl** alc. **binder**, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)
- IT 78-10-4DP, Tetraethoxysilane, hydrolyzate 17501-79-ODP, Titanium acetylacetonate, hydrolyzate
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(gas barrier **coating** composition of **polyvinyl** alc. **binder**, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)
- IT 24937-78-8D, Ethylene-vinyl acetate copolymer, saponified 25067-34-9, RS-110 181285-34-7, Soarnol D 2908
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(gas barrier **coating** composition of **polyvinyl alc. binder**, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)

IT 141-97-9D, Ethyl acetylacetate, zirconium chelate compds., hydrolyzate 1071-76-7D, Tetrabutoxy zirconium, Et acetylacetate chelate compds., hydrolyzate 1760-24-3, N-β-(Aminoethyl)-γ-aminopropyltrimethoxysilane

RL: TEM (Technical or engineered material use); USES (Uses)
(gas barrier **coating** composition of **polyvinyl alc. binder**, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)

IT 9002-88-4, Polyethylene

RL: TEM (Technical or engineered material use); USES (Uses)
(laminate base film; gas barrier **coating** composition of **polyvinyl alc. binder**, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)

IT 1344-28-1, Aluminum oxide, uses 7631-86-9, Silicon dioxide, uses

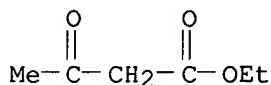
RL: TEM (Technical or engineered material use); USES (Uses)
(vapor barrier film; gas barrier **coating** composition of **polyvinyl alc. binder**, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)

IT 141-97-9D, Ethyl acetylacetate, zirconium chelate compds., hydrolyzate

RL: TEM (Technical or engineered material use); USES (Uses)
(gas barrier **coating** composition of **polyvinyl alc. binder**, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)

RN 141-97-9 HCAPLUS

CN Butanoic acid, 3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 12 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:750516 HCAPLUS

DN 139:245023

TI Retorted products packaged with gas-barrier light-shielding multilayer film bags

IN Mikami, Koichi; Otsuka, Yasushi; Kamio, Kenji

PA Dai Nippon Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003267453	A2	20030925	JP 2002-67916	20020313
PRAI	JP 2002-67916		20020313		
OS	MARPAT 139:245023				
AB	A bag, which is made of (1) a laminate of (a) a barrier substrate				

comprising a substrate film, an inorg. oxide deposition film, and a gas-barrier **coating** film on at least one side of the substrate film, (b) a light-shielding layer, (c) an optional intermediate substrate, and (d) a heat-sealable resin layer or (2) a laminate of (a') a surface substrate film, (b') a light-shielding layer, (c') a barrier substrate similar to that of (2), and (d') a heat-sealable resin layer, is packed with content such as cooked foods, frozen foods, rice cakes, soup, seasonings, drinking water, etc. and treated at 110-130° and 1-3 kgf/cm².G for 20-60 min. The inorg. oxide layer may have a pretreatment layer and optionally a primer layer. Thus, a biaxially-oriented PET film was coated with a SiO₂ film by vapor deposition, coated with a gas-barrier composition containing a hydrolyzed products of acetylacetone chelate of Ti(OCHMe₂)₄, Soarnol D 2935 (saponified ethylene-vinyl acetate copolymer), and poly(vinylpyrrolidone),, heated at 120° for 1 min, coated with a patterned layer, a white ink layer, and a black ink layer by gravure printing, and dry-laminated with a biaxially-oriented nylon 6 film via an **adhesive** layer and a nonoriented polypropylene film via an **adhesive** layer. The laminate was made into a bag, packed with curry, heat-sealed, and retorted at 120° and 2.1 kgf/cm².G for 30 min. O and steam permeabilities of the retort pouch were increased after retorting from 0.6 to 0.9 cc/m²/day at 23° and 90% RH and from 1.1 to 1.5 g/m²/day at 40° and 90% RH, resp.

IC ICM B65D081-24

ICS A23L003-00; B32B007-12; B32B009-00; B32B027-00; B65B055-02; B65B055-04; B65B055-06

CC 17-4 (Food and Feed Chemistry)

Section cross-reference(s): 38

ST food retort packaging laminated film gas barrier light shielding;

polyvinyl alc alkoxide hydrolyzate gas barrier layer retort pouch

IT Vapor deposition process

(barrier substrate film having inorg. oxide film formed upon; retorted products packaged with gas-barrier light-shielding multilayer film pouch)

IT Polyamides, biological studies

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(biaxially-oriented, intermediate substrate layer; retorted products packaged with gas-barrier light-shielding multilayer film pouch)

IT Polyurethanes, biological studies

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(black and white gravure ink compns. containing; retorted products packaged with gas-barrier light-shielding multilayer film pouch)

IT Carbon black, biological studies

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(black gravure ink compns. containing; retorted products packaged with gas-barrier light-shielding multilayer film pouch)

IT Polyesters, biological studies

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(film, substrate film; retorted products packaged with gas-barrier light-shielding multilayer film pouch)

IT Packaging materials

(films, gas-impermeable, multilayer; retorted products packaged with gas-barrier light-shielding multilayer film pouch)

IT Packaging materials

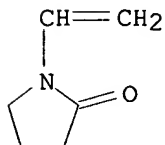
(films, heat-sealable, multilayer; retorted products packaged with gas-barrier light-shielding multilayer film pouch)

IT Inks

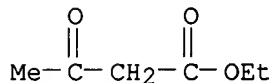
(gravure, black and white, light-shielding layer formation from; retorted products packaged with gas-barrier light-shielding multilayer film pouch)

- IT Polyolefins
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(heat-sealable layer; retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT Polyamides, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(intermediate substrate layer; retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT Chelates
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(of metal alcoholates, substrate film having gas-barrier layer containing (derivs. of); retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT Packaging materials
(retort pouches; retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT Cooking
(retort; retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT Food packaging materials
(retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT Metal alkoxides
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(substrate film having gas-barrier layer containing (derivs. of); retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT 1344-28-1, Alumina, biological studies 7631-86-9, Silica, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(deposition film, barrier substrate having; retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT 25038-59-9, Poly(ethylene terephthalate), biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(film, substrate film; retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT 25067-34-9D, Ethylene-vinyl alcohol copolymer, saponified
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(gas-barrier layer containing metal alkoxide chelate hydrolyzates and; retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT 9003-39-8, Polyvinylpyrrolidone 313056-69-8, Soarnol D 2935
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(gas-barrier layer containing poly(vinyl alc.) and metal alkoxide chelate hydrolyzates; retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT 123-54-6DP, Acetylacetone, reaction products with tetraisopropoxytitanium, hydrolyzates 141-97-9DP, Ethyl acetoacetate, reaction products with tetrabutoxyzirconium, hydrolyzates 546-68-9DP, Tetra-isopropoxytitanium, reaction products with acetylacetone, hydrolyzates 1071-76-7DP, Tetrabutoxyzirconium, reaction products with Et acetoacetate, hydrolyzates
RL: FFD (Food or feed use); PNU (Preparation, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gas-barrier layer containing poly(vinyl alc.) and; retorted products packaged with gas-barrier light-shielding multilayer film pouch)
- IT 9003-07-0, Polypropylene

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
 (heat-sealable layer; retorted products packaged with gas-barrier
 light-shielding multilayer film pouch)
 IT 25038-54-4, Nylon 6, biological studies
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
 (intermediate substrate layer; retorted products packaged with
 gas-barrier light-shielding multilayer film pouch)
 IT 13463-67-7, Titania, biological studies
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
 (white gravure ink compns. containing; retorted products packaged with
 gas-barrier light-shielding multilayer film pouch)
 IT **9003-39-8, Polyvinylpyrrolidone**
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
 (gas-barrier layer containing poly(vinyl alc.) and metal alkoxide chelate
 hydrolyzates; retorted products packaged with gas-barrier
 light-shielding multilayer film pouch)
 RN 9003-39-8 HCAPLUS
 CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 88-12-0
 CMF C6 H9 N O



IT **141-97-9DP**, Ethyl acetoacetate, reaction products with
 tetrabutoxyzirconium, hydrolyzates
 RL: FFD (Food or feed use); PNU (Preparation, unclassified); BIOL
 (Biological study); PREP (Preparation); USES (Uses)
 (gas-barrier layer containing **poly(vinyl alc.)** and;
 retorted products packaged with gas-barrier light-shielding multilayer
 film pouch)
 RN 141-97-9 HCAPLUS
 CN Butanoic acid, 3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



L17 ANSWER 13 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2003:258098 HCAPLUS
 DN 138:273088
 TI **Polyvinyl** alcohol-based gas barrier **coating**
 compositions with good adhesion and storageability and gas barrier films
 IN Hagio, Yumiko; Morinaka, Yuriko; Fukushima, Yoichi
 PA Kyodo Printing Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003096382	A2	20030403	JP 2001-295840	20010927
PRAI	JP 2001-295840		20010927		

AB Title compns. comprise (A) **polyvinyl alc.** containing acetoacetyl-modified **polyvinyl alc.**, (B) aziridine compds., and (C) water or water containing lower alcs., where A/B = 100/1 - 100/10. Thus, a composition with viscosity 27 mPa-s and good storage stability comprising 2 200 acetoacetyl-modified **polyvinyl alc.** 2, Poval 103 **polyvinyl alc.** 4, and Chemitite PZ 33 0.18, and iso-Pr alc./water mixture 94% was applied on a E 5100 polyethylene terephthalate film and dried at 80° for 15 s to give a gas barrier film with good transparency, adhesion to base film, high humidity storageability, and openability, and oxygen permeability <1 mL/m²·atm·day.

IC ICM C09D129-04

ICS B32B027-30

CC 42-10 (Coatings, Inks, and Related Products)

ST **polyvinyl alc** gas barrier **coating** compn adhesion storageability film; acetoacetyl modified **polyvinyl alc** Poval Chemitite **coating** compn

IT Polyesters, uses

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(base film; **polyvinyl alc.**-based gas barrier **coating** compns. with good adhesion for gas barrier films)

IT Polyesters, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(base films; **polyvinyl alc.**-based gas barrier **coating** compns. with good adhesion for gas barrier films)

IT **Coating** materials

(impermeable, gas; **polyvinyl alc.**-based gas barrier **coating** compns. with good adhesion for gas barrier films)

IT Plastic films

(**polyvinyl alc.**-based gas barrier **coating** compns. with good adhesion for gas barrier films)

IT **Coating** materials

(storage-stable; **polyvinyl alc.**-based gas barrier **coating** compns. with good adhesion for gas barrier films)

IT 151-56-4D, Aziridine, derivs. 52234-82-9, Chemitite PZ 33

RL: MOA (Modifier or additive use); USES (Uses)

(anchoring agent; **polyvinyl alc.**-based gas barrier **coating** compns. with good adhesion for gas barrier films)

IT 25038-59-9, E 5100, uses

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(base film; **polyvinyl alc.**-based gas barrier **coating** compns. with good adhesion for gas barrier films)

IT 9002-89-5, Poval 103 **39290-68-1**, Gohsefimer Z 200H

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(**polyvinyl alc.**-based gas barrier **coating** compns. with good adhesion for gas barrier films)

IT **39290-68-1**, Gohsefimer Z 200H

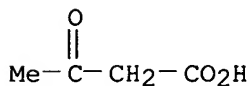
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(**polyvinyl alc.**-based gas barrier **coating** compns. with good adhesion for gas barrier films)

RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3

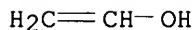


CM 2

CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

CRN 557-75-5
 CMF C2 H4 O



L17 ANSWER 14 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:14208 HCAPLUS

DN 138:63874

TI Heat- or pressure-sensitive recording material with undercoat layer
 containing poly(vinyl alcohol)

IN Serizawa, Shinichiro; Ogata, Yasuhiro

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003001941	A2	20030108	JP 2001-193131	20010626
	EP 1275519	A1	20030115	EP 2002-13963	20020625
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2003083200	A1	20030501	US 2002-178895	20020625
PRAI	JP 2001-193129	A	20010626		
	JP 2001-193130	A	20010626		
	JP 2001-193131	A	20010626		
	JP 2001-314938	A	20011012		
	JP 2001-314947	A	20011012		

AB The material comprises a support coated with (1) ≥1 undercoat layer
 containing acetoacetyl-modified poly(vinyl alc.), a partially saponified
 poly(vinyl alc.), and a hardening agent, and (2) a recording layer. The
 undercoat layer is coated by using a solution with viscosity ≤0.3

Pa.s (at 40°) using gravure roll. The material shows smooth image forming surface, good water resistance, high gloss and generation of blister is prevented.

IC ICM B41M005-26
ICS C08K003-34; C08K005-053; C08L029-04

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST heat pressure sensitive recording material undercoat layer; **polyvinyl** alc hardener undercoat layer; diazo recording material heat developable undercoat layer

IT Thermal printing materials
(heat- or pressure-sensitive recording material with undercoat layer containing poly(vinyl alc.))

IT Diazo process
(heat-developable; heat- or pressure-sensitive recording material with undercoat layer containing poly(vinyl alc.))

IT 67-56-1, Methanol, uses
RL: NUU (Other use, unclassified); USES (Uses)
(**coating** solvent; heat- or pressure-sensitive recording material with undercoat layer containing poly(vinyl alc.))

IT 32909-97-0, 2,3-Dihydroxy-5-methyl-1,4-dioxane
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(hardener; heat- or pressure-sensitive recording material with undercoat layer containing poly(vinyl alc.))

IT 441014-83-1, Somasif ME B 3
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(heat- or pressure-sensitive recording material with undercoat layer containing poly(vinyl alc.))

IT **39290-68-1**, Gohsefimer Z 100 115831-94-2, PVA C 506
RL: TEM (Technical or engineered material use); USES (Uses)
(heat- or pressure-sensitive recording material with undercoat layer containing **poly(vinyl alc.)**)

IT **39290-68-1**, Gohsefimer Z 100
RL: TEM (Technical or engineered material use); USES (Uses)
(heat- or pressure-sensitive recording material with undercoat layer containing **poly(vinyl alc.)**)

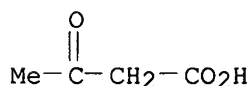
RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

CRN 557-75-5

CMF C2 H4 O

 $\text{H}_2\text{C}=\text{CH}-\text{OH}$

L17 ANSWER 15 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:568287 HCAPLUS

DN 135:144722

TI Ink-jet printing sheet containing poly(vinyl alcohol) with acetoacetate group and reducing agent

IN Takahashi, Koichi; Saeki, Hiroshi

PA Nippon Synthetic Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001213045	A2	20010807	JP 2000-26422	20000203
PRAI	JP 2000-26422		20000203		

AB The sheet contains (A) a poly(vinyl alc.) resin with an acetoacetate group and (B) a reducing agent in a support or its **coating** layer. It shows improved lightfastness, ink absorbency, feathering resistance, and humidity resistance.

IC ICM B41M005-00
ICS B05D005-04; B05D007-24; B41J002-01; C08F216-06

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST ink jet printing sheet support; **polyvinyl** alc acetoacetate support printing sheet; reducing agent ink jet printing paper

IT Ink-jet recording sheets
(paper; ink-jet printing paper using support containing poly(vinyl alc.) with acetoacetate group and reducing agent)

IT Paper
(printing, ink-jet; ink-jet printing paper using support containing poly(vinyl alc.) with acetoacetate group and reducing agent)

IT 56-86-0, Glutamic acid, uses 77-92-9, Citric acid, uses 302-01-2, Hydrazine, uses 538-74-9, Dibenzylsulfide 7631-90-5, Sodium hydrogensulfite 15475-67-9, Sodium phosphite 18299-48-4, Dithionous acid sodium salt
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(ink-jet printing paper using support containing poly(vinyl alc.) with acetoacetate group and reducing agent)

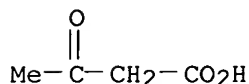
IT **39290-68-1D, Poly(vinyl** alcohol) acetoacetate, saponified
RL: TEM (Technical or engineered material use); USES (Uses)
(ink-jet printing paper using support containing **poly(vinyl** alc.) with acetoacetate group and reducing agent)

IT **39290-68-1D, Poly(vinyl** alcohol) acetoacetate, saponified
RL: TEM (Technical or engineered material use); USES (Uses)
(ink-jet printing paper using support containing **poly(vinyl** alc.) with acetoacetate group and reducing agent)

vinyl alc.) with acetoacetate group and reducing agent)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3

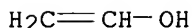


CM 2

CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

CRN 557-75-5
 CMF C2 H4 O



L17 ANSWER 16 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2001:326160 HCAPLUS
 DN 134:318733
 TI Thermal recording material having protective layer and its manufacturing method
 IN Mando, Norio; Ishida, Koichi; Suzuki, Hideyuki
 PA Oji Paper Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001121815	A2	20010508	JP 1999-308287	19991029
PRAI	JP 1999-308287		19991029		

AB The material comprises a support having thereon a recording layer containing electron donative and attractive compds. and a protective layer containing a pigment, an acetoacetyl group-modified poly(vinyl alc.), and 0.1-1.0 weight% (based on the total solid component of the protective layer) of a hydrazine compound It is manufactured by successively coating a recording layer solution and a protective layer solution with 2.0-6.0 pH containing the above compds. and drying them. It shows improved color development and water, oil, and plasticizer resistance.

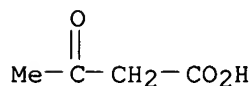
IC ICM B41M005-26
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other

Reprographic Processes)
 ST thermal printing material protective layer hydrazine; **polyvinyl**
 alc acetoacetyl modified protective layer
 IT Thermal printing materials
 (thermal printing material with protective layer containing pigment,
 modified poly(vinyl alc.), and hydrazine compound)
 IT Kaolin, uses
 RL: DEV (Device component use); MOA (Modifier or additive use); USES
 (Uses)
 (thermal printing material with protective layer containing pigment,
 modified poly(vinyl alc.), and hydrazine compound)
 IT **39290-68-1**, Gohsefimer Z 200
 RL: DEV (Device component use); USES (Uses)
 (thermal printing material with protective layer containing pigment,
 modified **poly(vinyl alc.)**, and hydrazine compound)
 IT 139-12-8, Aluminum acetate 1071-93-8, Adipic acid dihydrazide
 4146-43-4, Succinic acid hydrazide 10043-67-1, Potassium alum
 10102-71-3, Sodium alum 30601-03-7, Poly(acrylic acid hydrazide)
 RL: DEV (Device component use); MOA (Modifier or additive use); USES
 (Uses)
 (thermal printing material with protective layer containing pigment,
 modified poly(vinyl alc.), and hydrazine compound)
 IT **39290-68-1**, Gohsefimer Z 200
 RL: DEV (Device component use); USES (Uses)
 (thermal printing material with protective layer containing pigment,
 modified **poly(vinyl alc.)**, and hydrazine compound)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

CRN 9002-89-5

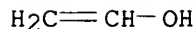
CMF (C2 H4 O)x

CCI PMS

CM 3

CRN 557-75-5

CMF C2 H4 O



L17 ANSWER 17 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2001:324366 HCAPLUS

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

DN 134:327501
 TI Poly(vinyl alcohol) layer-laminated film
 IN Inagaki, Kyoko; Matsuda, Nobumasa; Nagano, Hiroshi
 PA Toyobo Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001121658	A2	20010508	JP 1999-302200	19991025
PRAI	JP 1999-302200		19991025		

AB The laminate, which shows good printability, transparency, and shielding effect against gases and steam, consists of a substrate film and layer(s) containing 100 parts poly(vinyl alc.) (I) and 0.3-1 parts polyethyleneimine (II) on ≥ 1 side of the substrate. Thus, a 100:1 mixture of I (Gohsefimer Z 100) and II (Epomin P 1000) was applied on 1 side of corona discharge-treated biaxially oriented polypropylene films (P 2102) and dried at 130° to give test pieces having haze 2.2, O permeability 7.6 mL/m²-day-MPa, and good half-tone gravure printability.

IC ICM B32B027-30

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 42

ST **polyvinyl alc coating** polyethyleneimine anchor effect;
 laminate film **polyvinyl alc** surface layer; polypropylene support
polyvinyl alc laminate transparency; gravure printability
polyvinyl alc surface laminate; gas shield **polyvinyl alc**
 layer laminate; steam shield **polyvinyl alc** layer laminate

IT Polyolefins

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (film laminated with poly(vinyl alc.) surface layer containing polyethyleneimine for improving anchor effect)

IT Shields

(film laminated with poly(vinyl alc.) surface layer containing polyethyleneimine with gas- and steam-shielding property)

IT Laminated plastic films

Transparent films

(film laminated with poly(vinyl alc.) surface layer containing polyethyleneimine with gravure printability)

IT Polyamines

RL: MOA (Modifier or additive use); USES (Uses)
 (film laminated with poly(vinyl alc.) surface layer containing polyethyleneimine with gravure printability)

IT **Coating process**

(for film laminated with poly(vinyl alc.) surface layer containing polyethyleneimine for improving anchor effect)

IT Inks

(gravure; film laminated with poly(vinyl alc.) surface layer containing polyethyleneimine with gravure printability)

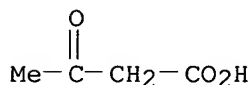
IT Petroleum resins

RL: MOA (Modifier or additive use); USES (Uses)
 (in film laminated with poly(vinyl alc.) surface layer containing polyethyleneimine for improving anchor effect)

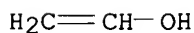
IT 9002-98-6, Aziridine homopolymer

RL: MOA (Modifier or additive use); USES (Uses)
 (Oribain EL 420; film laminated with poly(vinyl alc.) surface layer containing polyethyleneimine with gravure printability)

IT 332425-78-2, AD 372MW
 RL: MOA (Modifier or additive use); USES (Uses)
 (film laminated with poly(vinyl alc.) surface layer containing
 polyethyleneimine with gravure printability)
 IT 9002-89-5, Gohsenol NL 05 **39290-68-1**, Gohsefimer Z 100
 176087-11-9, Gohsenol KL 05
 RL: TEM (Technical or engineered material use); USES (Uses)
 (film laminated with **poly(vinyl alc.)** surface layer
 containing polyethyleneimine with gravure printability)
 IT 9003-07-0, Polypropylene
 RL: TEM (Technical or engineered material use); USES (Uses)
 (support, P 2102; film laminated with poly(vinyl alc.) surface layer
 containing polyethyleneimine with gravure printability)
 IT **39290-68-1**, Gohsefimer Z 100
 RL: TEM (Technical or engineered material use); USES (Uses)
 (film laminated with **poly(vinyl alc.)** surface layer
 containing polyethyleneimine with gravure printability)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)
 CM 1
 CRN 541-50-4
 CMF C4 H6 O3



CM 2
 CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS
 CM 3
 CRN 557-75-5
 CMF C2 H4 O



L17 ANSWER 18 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2001:172739 HCAPLUS
 DN 134:229714
 TI Thermal recording material containing partially saponified poly(vinyl
 alcohol)
 IN Seki, Shigetoshi; Ishida, Koichi
 PA Oji Paper Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese

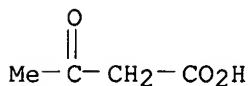
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001063214	A2	20010313	JP 1999-241378	19990827
PRAI	JP 1999-241378		19990827		
AB	The material comprises a support having thereon (A) a heat sensitive layer containing a leuco dye, a developing agent, and partially saponified poly(vinyl alc.) and (B) a resin layer hardened by ionizing radiation exposure in succession. It shows reduced background fog and improved surface gloss and recording d.				
IC	ICM B41M005-26				
CC	74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)				
ST	thermal printing material saponid polyvinyl alc; radiation curable resin layer thermal printing material				
IT	Polyurethanes, uses RL: DEV (Device component use); USES (Uses) (polyester-, acrylate, radiation curable resin layer; thermal printing material containing polyvinyl alc. in heat sensitive layer)				
IT	Thermal printing materials (thermal printing material containing polyvinyl alc. in heat sensitive layer)				
IT	9002-89-5 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (R 1230; thermal printing material containing polyvinyl alc. in heat sensitive layer)				
IT	329181-40-0, UV-Tronic High Gloss Coating RL: DEV (Device component use); USES (Uses) (radiation curable resin layer; thermal printing material containing polyvinyl alc. in heat sensitive layer)				
IT	9003-20-7D, Polyvinyl acetate, saponified 39290-68-1 , Gohsefimer Z 320 79484-84-7, KL 318 110585-81-4D, saponified 130960-31-5, PVA 217 143180-25-0, Poval 224 177646-18-3, Poval PVA 235 195889-45-3, PVA 505 220425-13-8, PVA 420 250578-45-1, PVA 210 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (thermal printing material containing polyvinyl alc. in heat sensitive layer)				
IT	39290-68-1 , Gohsefimer Z 320 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (thermal printing material containing polyvinyl alc. in heat sensitive layer)				
RN	39290-68-1 HCAPLUS				
CN	Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)				

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

CRN 557-75-5
CMF C2 H4 O

H₂C=CH-OH

L17 ANSWER 19 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:19227 HCAPLUS

DN 132:65130

TI Acetoacetyl-modified poly(vinyl alcohol) coated antifogging film

IN Goto, Hidenori; Imano, Takeshi

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000000935	A2	20000107	JP 1998-166865	19980615
PRAI	JP 1998-166865		19980615		

AB The film comprises a transparent substrate and ≥ 1 coating layer of an aqueous acetoacetyl-modified poly(vinyl alc.) containing a crosslinker of glyoxal (I) or vicinal diol. Thus, a film was made from a corona-treated and a primer-coated PET film and a topcoat of aqueous Gohsefimer Z 200 containing 40% aqueous I solution, 2% aqueous Rapisol B 90 solution and 2% aqueous Na (4-nonylphenoxytrioxyethylene) butylsulfonate.

IC ICM B32B027-30

ICS C08J003-24; C08J005-18; C08J007-04; C08K005-06; C08L029-04; C09K003-18; C07D319-12

CC 38-3 (Plastics Fabrication and Uses)

ST antifogging coating acetoacetyl polyvinyl alc; PET film antifogging coating; glyoxal crosslinking acetoacetyl polyvinyl alc

IT Antifogging agents

(coatings; acetoacetyl-modified poly(vinyl alc.) coated antifogging film)

IT Coating materials

(topcoats; acetoacetyl-modified poly(vinyl alc.) coated antifogging film)

IT 152758-80-0, Gohsefimer Z 200-glyoxal copolymer

253145-03-8 253145-04-9 253145-05-0

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(acetoacetyl-modified poly(vinyl alc.) coated antifogging film)

IT 152758-80-0, Gohsefimer Z 200-glyoxal copolymer

253145-03-8 253145-04-9 253145-05-0

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(acetoacetyl-modified **poly(vinyl alc.)** coated antifogging film)

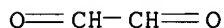
RN 152758-80-0 HCAPLUS

CN Ethanedial, polymer with ethenol homopolymer 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 107-22-2

CMF C2 H2 O2



CM 2

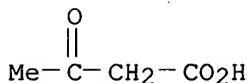
CRN 39290-68-1

CMF C4 H6 O3 . x (C2 H4 O) x

CM 3

CRN 541-50-4

CMF C4 H6 O3



CM 4

CRN 9002-89-5

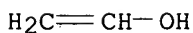
CMF (C2 H4 O) x

CCI PMS

CM 5

CRN 557-75-5

CMF C2 H4 O



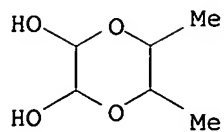
RN 253145-03-8 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate, polymer with 5,6-dimethyl-1,4-dioxane-2,3-diol (9CI) (CA INDEX NAME)

CM 1

CRN 32909-99-2

CMF C6 H12 O4



CM 2

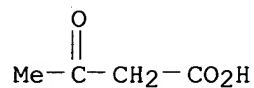
CRN 39290-68-1

CMF C4 H6 O3 . x (C2 H4 O) x

CM 3

CRN 541-50-4

CMF C4 H6 O3



CM 4

CRN 9002-89-5

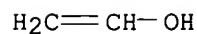
CMF (C2 H4 O) x

CCI PMS

CM 5

CRN 557-75-5

CMF C2 H4 O



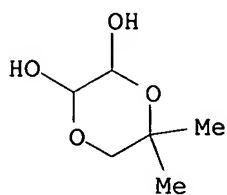
RN 253145-04-9 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate, polymer with 5,5-dimethyl-1,4-dioxane-2,3-diol (9CI) (CA INDEX NAME)

CM 1

CRN 254102-94-8

CMF C6 H12 O4



CM 2

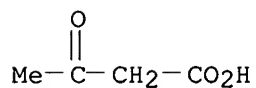
CRN 39290-68-1

CMF C4 H6 O3 . x (C2 H4 O) x

CM 3

CRN 541-50-4

CMF C4 H6 O3



CM 4

CRN 9002-89-5

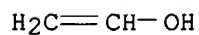
CMF (C2 H4 O) x

CCI PMS

CM 5

CRN 557-75-5

CMF C2 H4 O



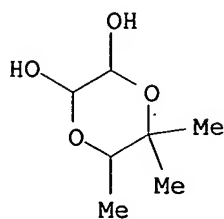
RN 253145-05-0 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate, polymer with 5,5,6-trimethyl-1,4-dioxane-2,3-diol (9CI) (CA INDEX NAME)

CM 1

CRN 254102-93-7

CMF C7 H14 O4



CM 2

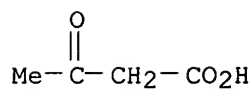
CRN 39290-68-1

CMF C4 H6 O3 . x (C2 H4 O)x

CM 3

CRN 541-50-4

CMF C4 H6 O3



CM 4

CRN 9002-89-5

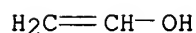
CMF (C2 H4 O)x

CCI PMS

CM 5

CRN 557-75-5

CMF C2 H4 O



L17 ANSWER 20 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:114097 HCAPLUS
 DN 130:200010
 TI Lightweight cellular concrete having waterproof **coatings** and its preparation
 IN Ito, Yasuyuki; Watanabe, Tomoiya; Nakanishi, Masuhiko
 PA Asahi Chemical Industry Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 11043385 A2 19990216 JP 1997-198765 19970724
 PRAI JP 1997-198765 19970724
 AB The preparation involves the following steps; (1) impregnating lightweight cellular concrete with an aqueous solution containing a hardenable resin which shows water solubility before cross linking, (2) crosslinking the resin, and (3) forming a **coating** on the surface. The aqueous solution may contain a hardening agent. The resulting concrete products are also claimed.
 IC ICM C04B041-63
 ICS C04B041-71
 CC 58-2 (Cement, Concrete, and Related Building Materials)
 Section cross-reference(s): 42
 ST lightweight cellular concrete **coating** waterproof resin;
 crosslinking polymer **coating** waterproofing concrete
 IT Polyureas
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);
 RACT (Reactant or reagent)
 (crosslinking agent; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT **Paints**
 (latex; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT Mortar
 (lightweight cellular; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT Concrete
 (lightwt., cellular; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT Acrylic polymers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**paints**; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT Concrete
 (porous, lightweight; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT Impregnating materials
 (preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT **Coating** materials
 (water-resistant, resin; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT 31292-89-4P 175870-12-9P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (crosslinking agent; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT 67-56-1DP, Methanol, reaction products with **polyvinyl** alc. and hexamethylene diisocyanate, preparation 822-06-0DP, Hexamethylene diisocyanate, reaction products with **polyvinyl** alc. and methanol
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (impregnant; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT 39290-68-1, **Polyvinyl** alcohol acetoacetate
 RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (impregnant; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)
 IT 220748-41-4P

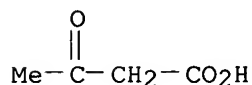
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (layers; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)

IT **39290-68-1, Polyvinyl** alcohol acetoacetate
 RL: PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses) (impregnant; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)

RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3

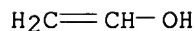


CM 2

CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

CRN 557-75-5
 CMF C2 H4 O

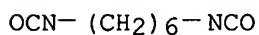


IT **220748-41-4P**
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (layers; preparation of lightweight cellular concrete having crosslinked polymer layers and waterproofing **coating** layers)

RN 220748-41-4 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate, polymer with 1,6-diisocyanatohexane and hydrazine (9CI) (CA INDEX NAME)

CM 1

CRN 822-06-0
 CMF C8 H12 N2 O2



CM 2

CRN 302-01-2
CMF H4 N2

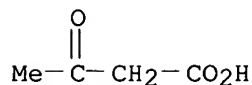
H₂N-NH₂

CM 3

CRN 39290-68-1
CMF C4 H6 O3 . x (C2 H4 O)x

CM 4

CRN 541-50-4
CMF C4 H6 O3



CM 5

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 6

CRN 557-75-5
CMF C2 H4 O

H₂C=CH-OH

L17 ANSWER 21 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:712532 HCAPLUS

DN 130:45331

TI Thermal printing material containing casein or modified poly(vinyl alcohol)

IN Kawai, Masato; Oshisaka, Chieko; Iida, Akiko

PA Oji Paper Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 10291367	A2	19981104	JP 1997-104494	19970422
PRAI	JP 1997-104494		19970422		
AB	The material, comprising a support with coatings of a recording				

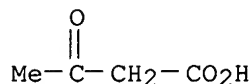
layer containing a leuco dye and a color developer and a protective layer, contains casein or acetoacetyl-modified poly(vinyl alc.) as a **binder** and a ketone resin as a crosslinking agent for the **binder** in the recording layer or the protective layer. The material shows good water resistance and running properties upon printing.

IC ICM B41M005-26
ICS C08F008-00; C08F008-10; C08L029-04; C08L059-00; C09J189-00
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST thermal printing material protective layer casein; acetoacetyl **polyvinyl** alc thermal printing; ketone resin crosslinking agent thermal printing
IT Thermal printing materials
(thermal printing material containing casein or modified poly(vinyl alc.))
IT Caseins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(thermal printing material containing casein or modified poly(vinyl alc.))
IT **39290-68-1**, Gohsefimer Z 200 216767-71-4, SI 668
RL: TEM (Technical or engineered material use); USES (Uses)
(thermal printing material containing casein or modified **poly(vinyl alc.)**)
IT **39290-68-1**, Gohsefimer Z 200
RL: TEM (Technical or engineered material use); USES (Uses)
(thermal printing material containing casein or modified **poly(vinyl alc.)**)
RN 39290-68-1 HCAPLUS
CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

CRN 9002-89-5

CMF (C2 H4 O)x

CCI PMS

CM 3

CRN 557-75-5

CMF C2 H4 O



L17 ANSWER 22 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:47825 HCAPLUS
DN 128:186560

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

TI Phase difference films with improved durability and liquid crystal displays using them

IN Azuma, Koji; Shimizu, Akiko

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 10010320	A2	19980116	JP 1996-165732	19960626
PRAI	JP 1996-165732		19960626		

AB The phase difference films are obtained by forming films from compns. containing poly(vinyl alc.) (d.p. 200-1000) or its derivs. and water-swella ble inorg. layered compds. (average particle diameter $\leq 10 \mu\text{m}$) at least on one side of isotropic transparent resin substrates via anchor coat layers. The phase difference films have smaller retardation value in the film plane than that in thickness direction, light transmittance $\geq 80\%$, and ΔE^* value (in $L^*a^*b^*$ color calcn.) ≤ 5 after 1000 h at 80° . Alternatively, the phase difference films are obtained by forming the above films at least on one side of uniaxially oriented transparent substrates of thermoplastic resins with neg. anisotropy of refractive index and show R_{40}/R_0 (R_0 = retardation value in film plane; R_{40} = retardation value measured with inclination of 40° in delayed phase axis as inclination axis) 0.9-1.1. Liquid crystal displays having the phase difference films, are also claimed.

IC ICM G02B005-30

ICS C08F116-06; C08K003-18; C09D129-04; G02F001-1335

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST liq crystal display phase difference film; **polyvinyl alc** hectorite phase difference film; durability phase difference film **polyvinyl alc**

IT Polyamides, properties

RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)

(anchor coat layers; durable phase-difference films having poly(vinyl alc.) derivs. containing water-swella ble layers materials for liquid crystal displays)

IT **Coating materials**

Liquid crystal displays

(durable phase-difference films having poly(vinyl alc.) derivs. containing water-swella ble layers materials for liquid crystal displays)

IT Plastic films

RL: DEV (Device component use); PRP (Properties); USES (Uses)

(durable phase-difference films having poly(vinyl alc.) derivs. containing water-swella ble layers materials for liquid crystal displays)

IT 9004-62-0P, Hydroxyethyl cellulose

RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)

(Daicel SP 400, anchor coat layers; durable phase-difference films having poly(vinyl alc.) derivs. containing water-swella ble layers materials for liquid crystal displays)

IT 9002-89-5, Poly(vinyl alcohol)

RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)

(Poval 103, surface layers; durable phase-difference films having poly(vinyl alc.) derivs. containing water-swella ble layers materials for

liquid crystal displays)

IT 203133-25-9P
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(anchor coat layers; durable phase-difference films having **poly (vinyl alc.)** derivs. containing water-swellaable layers materials for liquid crystal displays)

IT 99324-70-6P 203133-23-7P 203133-24-8P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(anchor coat layers; durable phase-difference films having **poly (vinyl alc.)** derivs. containing water-swellaable layers materials for liquid crystal displays)

IT 9002-98-6, Epomin P 1000 129522-39-0, Sumirez 5004
RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)
(anchor coat layers; durable phase-difference films having poly(vinyl alc.) derivs. containing water-swellaable layers materials for liquid crystal displays)

IT 115471-08-4, R 1130
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(anchor coat layers; durable phase-difference films having poly(vinyl alc.) derivs. containing water-swellaable layers materials for liquid crystal displays)

IT 159132-00-0, Sumirez 5001
RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)
(durable phase-difference films having poly(vinyl alc.) derivs. containing water-swellaable layers materials for liquid crystal displays)

IT 12173-47-6, Hectorite
RL: MOA (Modifier or additive use); USES (Uses)
(durable phase-difference films having poly(vinyl alc.) derivs. containing water-swellaable layers materials for liquid crystal displays)

IT 9012-09-3, Triacetyl cellulose
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(films, substrates, Fuji Tac SH 80; durable phase-difference films having poly(vinyl alc.) derivs. containing water-swellaable layers materials for liquid crystal displays)

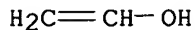
IT 53320-86-8, Laponite XLS
RL: MOA (Modifier or additive use); USES (Uses)
(surface layers containing; durable phase-difference films having poly(vinyl alc.) derivs. containing water-swellaable layers materials for liquid crystal displays)

IT 203133-25-9P
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(anchor coat layers; durable phase-difference films having **poly (vinyl alc.)** derivs. containing water-swellaable layers materials for liquid crystal displays)

RN 203133-25-9 HCAPLUS
CN Ethenol, polymer with ethenol homopolymer 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



CM 2

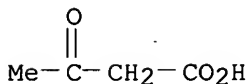
CRN 39290-68-1

CMF C4 H6 O3 . x (C2 H4 O)x

CM 3

CRN 541-50-4

CMF C4 H6 O3



CM 4

CRN 9002-89-5

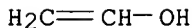
CMF (C2 H4 O)x

CCI PMS

CM 5

CRN 557-75-5

CMF C2 H4 O



IT 203133-23-7P 203133-24-8P

RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)

(anchor coat layers; durable phase-difference films having **poly (vinyl alc.)** derivs. containing water-swellable layers materials for liquid crystal displays)

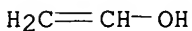
RN 203133-23-7 HCAPLUS

CN Ethenol, polymer with 1,2-ethanediamine and ethenol homopolymer 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

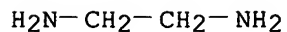
CMF C2 H4 O



CM 2

CRN 107-15-3

CMF C2 H8 N2



CM 3

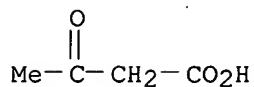
CRN 39290-68-1

CMF C4 H6 O3 . x (C2 H4 O) x

CM 4

CRN 541-50-4

CMF C4 H6 O3



CM 5

CRN 9002-89-5

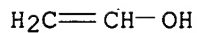
CMF (C2 H4 O) x

CCI PMS

CM 6

CRN 557-75-5

CMF C2 H4 O



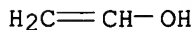
RN 203133-24-8 HCAPLUS

CN Ethanedial, polymer with ethenol and ethenol homopolymer 3-oxobutanoate
(9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

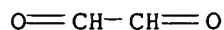
CMF C2 H4 O



CM 2

CRN 107-22-2

CMF C2 H2 O2



CM 3

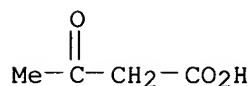
CRN 39290-68-1

CMF C4 H6 O3 . x (C2 H4 O)x

CM 4

CRN 541-50-4

CMF C4 H6 O3



CM 5

CRN 9002-89-5

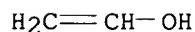
CMF (C2 H4 O)x

CCI PMS

CM 6

CRN 557-75-5

CMF C2 H4 O



L17 ANSWER 23 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1997:787807 HCAPLUS

DN 128:62958

TI Hydrophilic aqueous treating agents for metals and treating process therewith

IN Osako, Tomohiro; Sako, Ryosuke; Kojima, Hiroki

PA Nihon Parkerizing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09316434	A2	19971209	JP 1996-140352	19960603
PRAI	JP 1996-140352		19960603		

AB Title agents contain (a) polyoxyethylene-containing water-soluble organic compds.,

(b) hydrophilic polymers containing sulfonato, phosphonato, amino, and/or quaternary ammonium groups, and (c) poly(vinyl alc.) (I), water-soluble I derivs. and/or water-soluble polymers based on acrylamides CH₂:CR₁CONR₂R₃ (R₁ = H, Me; R₂, R₃ = H, C₁-4 alkyl, benzyl, C₁-3 hydroxyalkyl). A chromated

Al panel was soaked in an aqueous solution containing poly(ethylene oxide), acrylic acid-sulfoethyl methacrylate copolymer, I, and an antimicrobial agent and baked to form a panel showing good hydrophilicity initially and after 5 cycles of heating at 80° for 16 h.

IC ICM C09K003-18
ICS B05D007-14; C08L029-04; C08L031-04; C08L071-02; C09D133-26;
C23C022-00

CC 42-10 (Coatings, Inks, and Related Products)

ST heat resistance hydrophilicity aq **coating** metal; polyoxyethylene blend hydrophilic aq **coating**; polyacrylamide blend hydrophilic aq **coating**; polyvinyl alc blend hydrophilic aq **coating**; sulfonato polymer blend hydrophilic aq **coating**; phosphonato polymer blend hydrophilic aq **coating**; amino polymer blend hydrophilic aq **coating**; quaternary ammonium polymer blend hydrophilic **coating**

IT Coating materials
(hydrophilic **coatings**; aqueous **coatings** containing specific polymer blends with heat-resistant hydrophilicity for metals)

IT Acrylic polymers, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(hydrophilic or water-soluble; aqueous **coatings** containing specific polymer blends with heat-resistant hydrophilicity for metals)

IT Polyoxyalkylenes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(prepolymers with polyisocyanates, crosslinker; aqueous **coatings** containing specific polymer blends with heat-resistant hydrophilicity for metals)

IT Metals, miscellaneous
RL: MSC (Miscellaneous)
(substrates; aqueous **coatings** containing specific polymer blends with heat-resistant hydrophilicity for metals)

IT Polyoxyalkylenes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(water-soluble; aqueous **coatings** containing specific polymer blends with heat-resistant hydrophilicity for metals)

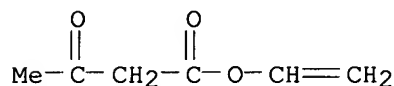
IT 25322-68-3D, prepolymers with polyisocyanates
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(crosslinker; aqueous **coatings** containing specific polymer blends with heat-resistant hydrophilicity for metals)

IT 107-22-2, Glyoxal
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinker; aqueous **coatings** containing specific polymer blends with heat-resistant hydrophilicity for metals)

IT 26062-79-3, Poly(dimethyldiallylammonium chloride) 30735-05-8, Acrylic acid-sodium vinylsulfonate copolymer 51912-17-5 62152-03-8, Acrylic acid-2-sulfoethyl methacrylate copolymer 62744-35-8, Poly(sodium styrenesulfonate)
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(hydrophilic; aqueous **coatings** containing specific polymer blends with heat-resistant hydrophilicity for metals)

IT 7429-90-5, Aluminum, miscellaneous 12617-27-5
RL: MSC (Miscellaneous)
(substrates; aqueous **coatings** containing specific polymer blends with

heat-resistant hydrophilicity for metals)
 IT 9002-89-5, Poly(vinyl alcohol) 9003-05-8, Polyacrylamide 9003-06-9,
 Acrylamide-acrylic acid copolymer 25322-68-3 49793-31-9,
 Poly(vinyl acetoacetate) 143256-20-6, Adipic
 acid-ε-caprolactam-poly(ethylene glycol)diamine block copolymer
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (water-soluble; aqueous **coatings** containing specific polymer blends with
 heat-resistant hydrophilicity for metals)
 IT 49793-31-9, Poly(vinyl acetoacetate)
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (water-soluble; aqueous **coatings** containing specific polymer blends with
 heat-resistant hydrophilicity for metals)
 RN 49793-31-9 HCAPLUS
 CN Butanoic acid, 3-oxo-, ethenyl ester, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 2424-97-7
 CMF C6 H8 O3



L17 ANSWER 24 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1997:256780 HCAPLUS
 DN 126:239203
 TI Aqueous resin compositions with short curing time and low curing
 temperature
 IN Maekawa, Tsukasa; Hayashi, Hiroyasu; Kanya, Kazusaki; Kitajima, Takashi
 PA Otsuka Kagaku Kk, Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09031165	A2	19970204	JP 1995-187064	19950724
PRAI	JP 1995-187064		19950724		

AB Title comps., useful as **coatings, adhesives**, lining,
 fiber processing, etc., comprise aqueous resin emulsions as main components
 [e.g., poly(vinyl alc.), acrylic polymers], epoxy resins as modifiers,
 dihydrazides as curing agents, and monohydrazides, imidazoles, acid
 anhydrides, tertiary amines, carboxylic acids, and/or dicyandiamide as
 curing accelerators. Thus, 10% aqueous acetoacetylated poly(vinyl alc.)
 solution
 (acetoacetylation degree 6.0 mol%, saponification degree 99 mol%) 100, Epo
 Tohto
 YD 128 1, 10% aqueous adipic acid dihydrazide solution 5, and 2% aqueous
 salicylic
 acid hydrazide solution 1 part were blended to give a composition showing
 curing
 time at room temperature 2 min.

IC ICM C08G059-40
ICS C08G059-40; C08G059-42; C08G059-50; C08L063-00

CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 40

ST **polyvinyl** alc aq emulsion curability; acrylic polymer aq emulsion curability; epoxy resin modifier **polyvinyl** alc emulsion; hydrazide curing agent **polyvinyl** alc emulsion

IT Crosslinking catalysts
(aqueous resin emulsions with short curing time and low curing temperature)

IT Acrylic fibers, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(aqueous resin emulsions with short curing time and low curing temperature)

IT Anhydrides
Carboxylic acids, uses
RL: CAT (Catalyst use); USES (Uses)
(crosslinking accelerators; aqueous resin emulsions with short curing time and low curing temperature)

IT Crosslinking agents
(dihydrazides; aqueous resin emulsions with short curing time and low curing temperature)

IT Acrylic polymers, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(emulsions; aqueous resin emulsions with short curing time and low curing temperature)

IT Epoxy resins, uses
RL: MOA (Modifier or additive use); USES (Uses)
(modifiers; aqueous resin emulsions with short curing time and low curing temperature)

IT Amines, uses
RL: CAT (Catalyst use); USES (Uses)
(tertiary, crosslinking accelerators; aqueous resin emulsions with short curing time and low curing temperature)

IT 69-72-7, Salicylic acid, uses 85-44-9, 1,3-Isobenzofurandione
102-82-9, Tributylamine 461-58-5 693-98-1, 2-Methylimidazole
936-02-7, Salicylic acid hydrazide 5399-22-4, Lauric acid hydrazide
RL: CAT (Catalyst use); USES (Uses)
(crosslinking accelerators; aqueous resin emulsions with short curing time and low curing temperature)

IT 1071-93-8, Adipic acid dihydrazide
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking agents; aqueous resin emulsions with short curing time and low curing temperature)

IT **39290-68-1, Poly(vinyl alcohol) acetoacetate**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(emulsions; aqueous resin emulsions with short curing time and low curing temperature)

IT 25038-04-4, Epichlorohydrin-glycerol copolymer 25068-38-6
RL: MOA (Modifier or additive use); USES (Uses)
(modifiers; aqueous resin emulsions with short curing time and low curing temperature)

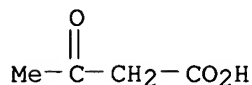
IT **39290-68-1, Poly(vinyl alcohol) acetoacetate**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(emulsions; aqueous resin emulsions with short curing time and low curing temperature)

RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
CMF C4 H6 O3

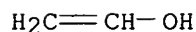


CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

CRN 557-75-5
CMF C2 H4 O



L17 ANSWER 25 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1997:124365 HCAPLUS

DN 126:132708

TI Aqueous **coatings** containing low amount of volatile organic compounds

PA Rohm and Haas Company, USA

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09003404	A2	19970107	JP 1996-177217	19960619
	EP 750022	A2	19961227	EP 1996-304071	19960604
	EP 750022	A3	19990728		
	EP 750022	B1	20020918		
	R: DE, ES, FR, GB, IT, NL, SE				
	AU 9654742	A1	19970109	AU 1996-54742	19960605
	AU 701494	B2	19990128		
	CA 2178869	AA	19961220	CA 1996-2178869	19960612
	BR 9602783	A	19980422	BR 1996-2783	19960613
	CN 1145387	A	19970319	CN 1996-102311	19960618
	CN 1090216	B	20020904		
PRAI	US 1995-301P	P	19950619		

AB Aqueous **coatings**, having good adhesion, hardness and chemical/water resistance without impairing the gloss, contain latex polymer **binders** having a glass transition temperature (Tg) of -35° to +30° and reactive groups (A), poly(vinyl alc.) having complementary reactive groups to the A in the **binders**, and <2% (based on the dried polymer **binder** weight) of volatile organic compds. A typical aqueous **coating** contained acetoacetoxyethyl methacrylate-Bu

acrylate-methacrylic acid-Me methacrylate copolymer and 4 mol%
aldehyde-terminated poly(vinyl alc.) (by oxidizing the **polyvinyl**
alc. with NaIO₄).

IC ICM C09D187-00
ICS C08G081-02

CC 42-7 (**Coatings**, Inks, and Related Products)

ST aldehyde terminated **polyvinyl** alc crosslinker **coating**;
acrylic **binder** crosslinker aldehyde **polyvinyl** alc;
adhesion aq acrylic **coating** crosslinker; hardness aq acrylic
coating crosslinker; chem resistance aq acrylic **coating**
crosslinker; water resistance aq acrylic **coating** crosslinker

IT Acrylic polymers, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(functional; aqueous **coatings** containing functional poly(vinyl alc.)
crosslinkers)

IT **Coating** materials
(latex, adhesion, hardness, chemical and water resistance; functional
acrylic biner-based aqueous **coatings** containing functional poly(vinyl
alc.) crosslinkers)

IT **136844-57-0P**, Acetoacetoxyethyl methacrylate-butyl
acrylate-methacrylic acid-methyl methacrylate copolymer
186407-48-7P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(aqueous **coatings** containing functional **poly(vinyl**
alc.) crosslinkers for adhesion/hardness/chemical and water resistance)

IT 9002-89-5DP, Poly(vinyl alcohol), aldehyde-terminated
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(crosslinkers; functional acrylic aqueous **coatings** containing
functional poly(vinyl alc.) crosslinkers for adhesion/hardness/chemical
and water resistance)

IT 7790-28-5, Sodium periodate
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidizing agents for poly(vinyl alc.); functional acrylic aqueous
coatings containing functional poly(vinyl alc.) crosslinkers for
adhesion/hardness/chemical and water resistance)

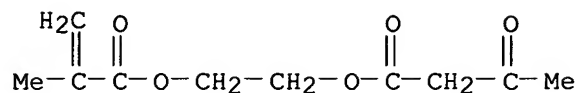
IT **136844-57-0P**, Acetoacetoxyethyl methacrylate-butyl
acrylate-methacrylic acid-methyl methacrylate copolymer
186407-48-7P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(aqueous **coatings** containing functional **poly(vinyl**
alc.) crosslinkers for adhesion/hardness/chemical and water resistance)

RN 136844-57-0 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester,
polymer with butyl 2-propenoate, methyl 2-methyl-2-propenoate and
2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

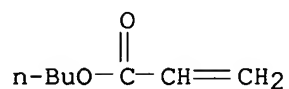
CRN 21282-97-3
CMF C10 H14 O5



CM 2

CRN 141-32-2

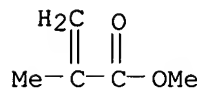
CMF C7 H12 O2



CM 3

CRN 80-62-6

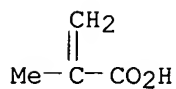
CMF C5 H8 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



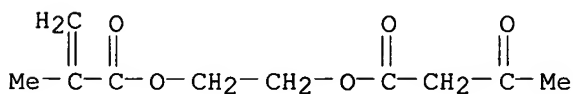
RN 186407-48-7 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with butyl 2-propenoate, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

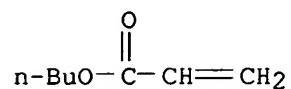
CRN 21282-97-3

CMF C10 H14 O5



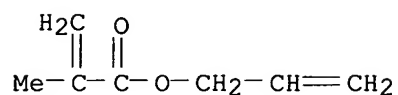
CM 2

CRN 141-32-2
CMF C7 H12 O2



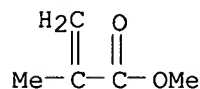
CM 3

CRN 96-05-9
CMF C7 H10 O2



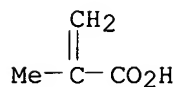
CM 4

CRN 80-62-6
CMF C5 H8 O2



CM 5

CRN 79-41-4
CMF C4 H6 O2



L17 ANSWER 26 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:576806 HCAPLUS
DN 122:326615
TI Ink jet recording sheets
IN Mukoyoshi, Shunichiro; Kono, Kazuhiko; Fujita, Seigoro
PA Shinoji Seishi Kk, Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07040646	A2	19950210	JP 1993-185942	19930728
PRAI	JP 1993-185942		19930728		

AB The recording sheets contain underlayers of poly(vinylpyrrolidone) and upper layers of poly(vinyl alc.) formed by coating aqueous compns. onto supports. The sheets show good ink absorption and ink-drying properties, and provide clear, high-d. images; they are useful for overhead projection slides. Thus, a PET film was coated with an aqueous solution

containing Luviskol K-90 and an aqueous solution containing Poval 105 to give an ink-jet recording sheet.

IC ICM B41M005-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST ink jet printing sheet **polyvinylpyrrolidone; polyvinyl alc** ink jet sheet

IT Printing, nonimpact

(ink-jet, ink-jet recording sheet coated with **polyvinyl pyrrolidone** and poly(vinyl alc.))

IT 9002-89-5, Poval 105 **9003-39-8**, Luviskol K 90 **39290-68-1**, Gohsefimer Z 200

RL: DEV (Device component use); USES (Uses)

(ink-jet recording sheet coated with **polyvinyl pyrrolidone** and **poly(vinyl alc.)**)

IT **9003-39-8**, Luviskol K 90 **39290-68-1**, Gohsefimer Z 200

RL: DEV (Device component use); USES (Uses)

(ink-jet recording sheet coated with **polyvinyl pyrrolidone** and **poly(vinyl alc.)**)

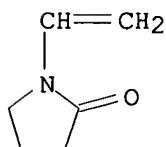
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



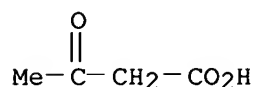
RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3

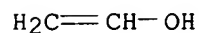


CM 2

CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

CRN 557-75-5
 CMF C2 H4 O



L17 ANSWER 27 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1991:610320 HCAPLUS

DN 115:210320

TI Low-temperature Michael addition in crosslinking

IN Clemens, Robert J.

PA Eastman Kodak Co., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 5017649	A	19910521	US 1988-144996	19880119
PRAI	US 1988-144996		19880119		

AB The dicarbonyl compds. MeCOCH(R)COX [R = H, hydrocarbyl (no R acidic enough to neutralize basic catalysts); X = alkoxy, amino, hydrocarbyl, or polymeric group] are alkylated by RCH:CR1COX1 (I) [R1 = H, Me, CN, Ac, CO2R; X1 as for X in the presence of the catalysts R3R4NC(:NR2)R1 (R1 = hydrocarbyl; R2-4 = H, alkyl, aralkyl, or form a ring) or R8R9N(:NR5)NR6R7 (R5-9 = H, alkyl, or ≥2 form a ring), resulting in crosslinking. Thus, a 10:90 acetoacetoxymethyl acrylate-Me methacrylate copolymer solution containing 1 equivalent trimethylolpropane triacrylate in Et 3-ethoxypropionate and 0.1 equiv.tetramethylguanidine had gel time 1 h.

IC C08F026-04; C08G063-48; C08G002-00

NCL 525059000

CC 42-8 (Coatings, Inks, and Related Products)

Section cross-reference(s): 3, 7, 22, 23

ST Michael addn crosslinking; acetoxyethyl methacrylate copolymer crosslinking; teramethylguanidine catalyst crosslinking; trimethylolpropane acrylate crosslinker polyester; catalyst crosslinking Michael addn

IT Coating materials

(crosslinking of, by Michael addition, catalysts for)

IT Polyesters, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(crosslinking of, by Michael addition, catalysts for)

IT Unsaturated compounds
RL: USES (Uses)
(cyclic amines and guanidines, for crosslinking by Michael addition)

IT Kinetics of Michael reaction
(pseudo-first order, of Et acrylate with isobutylacetyl acetate, catalyzed)

IT Crosslinking
(addition, by Michael, of polymers containing dicarbonyl groups)

IT 80-70-6 3001-72-7 6674-22-2
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for crosslinking by Michael addition)

IT 136507-97-6 136640-71-6 136748-64-6
136883-36-8
RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, crosslinking of, by Michael addition)

IT 79-41-4D, alkyl esters 110-16-7D, 2-Butenedioic acid (Z)-, alkyl esters
3724-65-0D, 2-Butenoic acid, alkyl esters 5459-04-1, Ethylene
glycol bis acetoacetate 6079-98-7 14276-67-6,
Neopentylglycolbis(acetoacetate) 15625-89-5 22208-25-9,
Trimethylolpropane trisacetoacetate 32818-60-3
39290-68-1, Polyvinylalcohol acetoacetate
136624-47-0
RL: USES (Uses)
(crosslinking agents, by Michael addition)

IT 110-17-8D, 2-Butenedioic acid (E)-, alkyl esters
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agents, by Michael addition)

IT 136507-97-6 136640-71-6 136748-64-6
136883-36-8
RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, crosslinking of, by Michael addition)

RN 136507-97-6 HCAPLUS

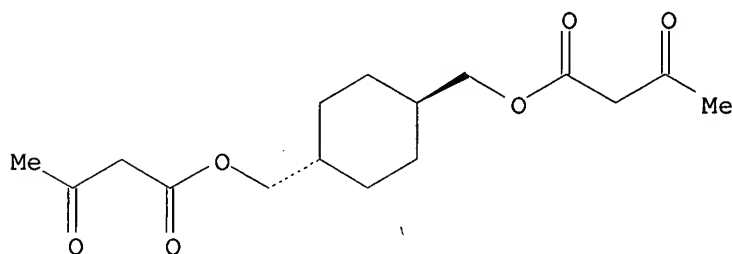
CN Butanoic acid, 3-oxo-, 1,4-cyclohexanediylbis(methylene) ester, trans-,
polymer with 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl
di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 96453-30-4

CMF C16 H24 O6

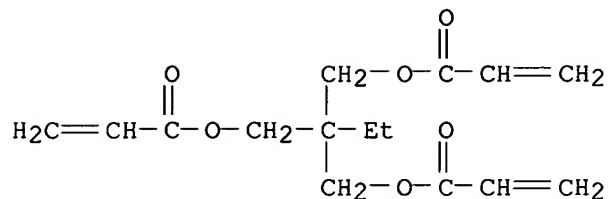
Relative stereochemistry.



CM 2

CRN 15625-89-5

CMF C15 H20 O6



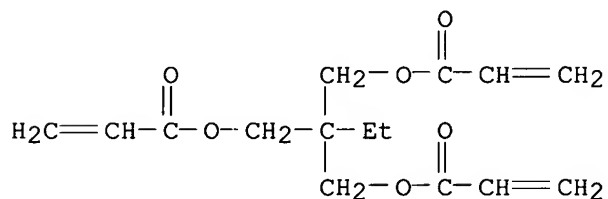
RN 136640-71-6 HCAPLUS

CN Cellulose, tris(3-oxobutanoate), polymer with 2-ethyl-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

CMF C15 H20 O6



CM 2

CRN 119466-02-3

CMF C4 H6 O3 . 1/3 Unspecified

CM 3

CRN 9004-34-6

CMF Unspecified

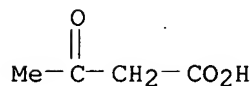
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 541-50-4

CMF C4 H6 O3



RN 136748-64-6 HCAPLUS

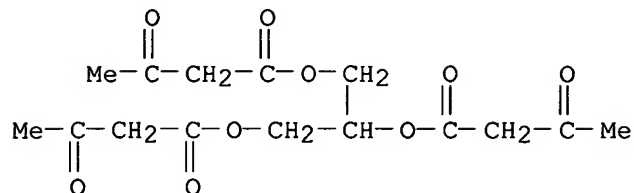
CN Cellulose, acetate butanoate 2-propenoate, polymer with 1,2,3-propanetriyl

tris(3-oxobutanoate) (9CI) (CA INDEX NAME)

CM 1

CRN 6079-98-7

CMF C15 H20 O9



CM 2

CRN 136601-45-1

CMF C4 H8 O2 . x C3 H4 O2 . x C2 H4 O2 . x Unspecified

CM 3

CRN 9004-34-6

CMF Unspecified

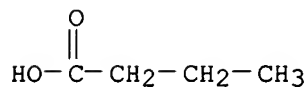
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 107-92-6

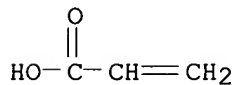
CMF C4 H8 O2



CM 5

CRN 79-10-7

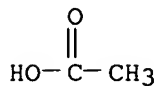
CMF C3 H4 O2



CM 6

CRN 64-19-7

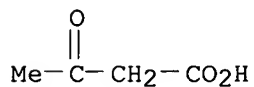
CMF C2 H4 O2



RN 136883-36-8 HCAPLUS
 CN 1,3-Benzenedicarboxylic acid, polymer with dimethyl
 cyclohexanedicarboxylate, 2,2-dimethyl-1,3-propanediol,
 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 2-ethyl-2-[[1-oxo-2-
 propenyl)oxy)methyl]-1,3-propanediyl di-2-propenoate, 3-oxobutanoate (9CI)
 (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3

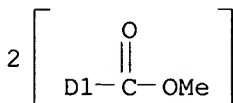


CM 2

CRN 201339-81-3
 CMF (C15 H20 O6 . C10 H16 O4 . C8 H6 O4 . C6 H14 O3 . C5 H12 O2)x
 CCI PMS

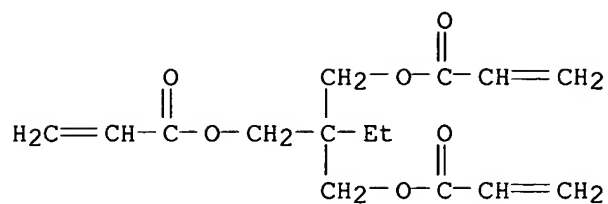
CM 3

CRN 54773-39-6
 CMF C10 H16 O4
 CCI IDS



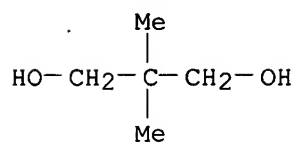
CM 4

CRN 15625-89-5
 CMF C15 H20 O6



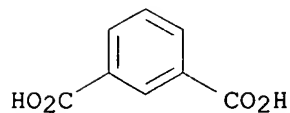
CM 5

CRN 126-30-7
CMF C5 H12 O2



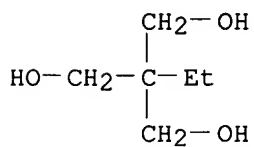
CM 6

CRN 121-91-5
CMF C8 H6 O4



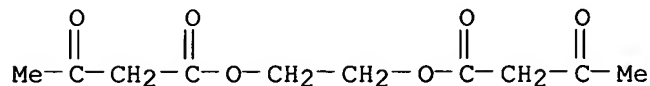
CM 7

CRN 77-99-6
CMF C6 H4 O3



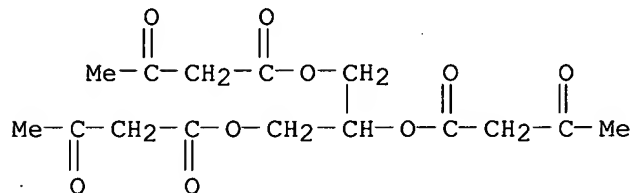
IT 5459-04-1, Ethylene glycol bis acetoacetate 6079-98-7
14276-67-6, Neopentylglycolbis(acetoacetate) 22208-25-9,
Trimethylolpropane trisacetoacetate 32818-60-3
39290-68-1, Polyvinylalcohol acetoacetate
136624-47-0
RL: USES (Uses)
(crosslinking agents, by Michael addition)
RN 5459-04-1 HCAPLUS

CN Butanoic acid, 3-oxo-, 1,2-ethanediyl ester (9CI) (CA INDEX NAME)



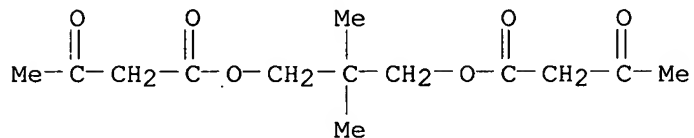
RN 6079-98-7 HCAPLUS

CN Butanoic acid, 3-oxo-, 1,2,3-propanetriyl ester (9CI) (CA INDEX NAME)



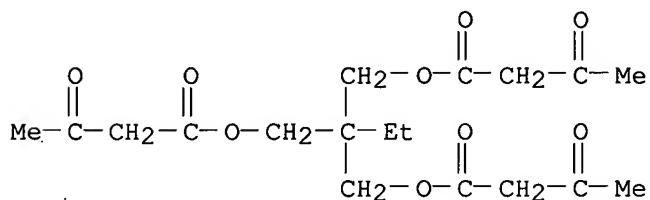
RN 14276-67-6 HCAPLUS

CN Butanoic acid, 3-oxo-, 2,2-dimethyl-1,3-propanediyl ester (9CI) (CA INDEX NAME)



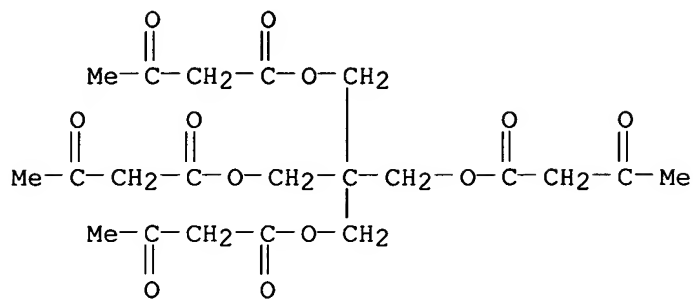
RN 22208-25-9 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[(1,3-dioxobutoxy)methyl]-2-ethyl-1,3-propanediyl ester (9CI) (CA INDEX NAME)



RN 32818-60-3 HCAPLUS

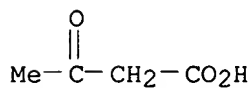
CN Butanoic acid, 3-oxo-, 2,2-bis[(1,3-dioxobutoxy)methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)



RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3

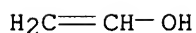


CM 2

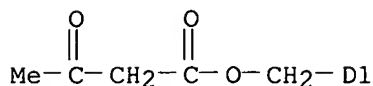
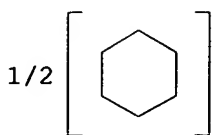
CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

CRN 557-75-5
 CMF C2 H4 O



RN 136624-47-0 HCAPLUS
 CN Butanoic acid, 3-oxo-, cyclohexanediylbis(methylene) ester (9CI) (CA INDEX NAME)



L17 ANSWER 28 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1989:595671 HCAPLUS
 DN 111:195671
 TI Manufacture of granular crosslinked gel
 IN Shimokawa, Wataru; Fukumori, Katsuaki; Kenjo, Takuya
 PA Hoechst Gosei Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent.
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01118529	A2	19890511	JP 1987-277203	19871030
	JP 07005746	B4	19950125		
PRAI	JP 1987-277203		19871030		

AB The title gels, having good hardness and durability, are manufactured by dripping aqueous solns. containing acetoacetyl-containing water-soluble polymers and water-soluble polysaccharides which gel with ≥ 1 metal ions into an aqueous metal salt solution to form granules of the polymers coated with the gelled polysaccharides, and then irradiating the granules with UV. Thus, an aqueous solution containing 4.0% acetoacetylated poly(vinyl alc.) and 0.7% Na alginate was added dropwise to 1% aqueous CaCl_2 to prepare 2-mm granules, which were irradiated by UV and washed to give granules with average strength 3 kg initially and 3 kg after 7 days in H_2O at room temperature, vs., 0.8 and ≤ 0.1 , resp., without UV irradiation

IC ICM C08J003-12
 ICS C08J003-28

CC 35-8 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 43

ST polymer gel granule strength; polysaccharide **coating** polymer gel strength; acetoacetylated **polyvinyl** alc gel; alginate gel strength

IT Polysaccharides, uses and miscellaneous
 RL: USES (Uses)

(gels from water-soluble polymers and, with good strength and durability)
 IT 39290-68-1, Poly(vinyl alcohol) acetoacetate
 104708-71-6

RL: USES (Uses)

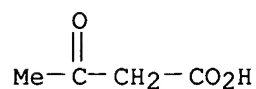
(gels from polysaccharides and, with good strength and durability)

IT 9005-38-3, Sodium alginate

RL: USES (Uses)

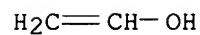
(gels from water-soluble polymers and, with good strength and durability)

IT 39290-68-1, Poly(vinyl alcohol) acetoacetate
 104708-71-6
 RL: USES (Uses)
 (gels from polysaccharides and, with good strength and durability)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)
 CM 1
 CRN 541-50-4
 CMF C4 H6 O3



CM 2
 CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

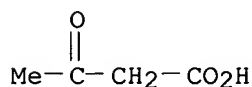
CM 3
 CRN 557-75-5
 CMF C2 H4 O



RN 104708-71-6 HCAPLUS
 CN Cellulose, 3-oxobutanoate, 2-hydroxyethyl ether (9CI) (CA INDEX NAME)
 CM 1
 CRN 9004-34-6
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2
 CRN 541-50-4
 CMF C4 H6 O3



CM 3

CRN 107-21-1
CMF C2 H6 O2

HO-CH₂-CH₂-OH

L17 ANSWER 29 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1983:217310 HCAPLUS

DN 98:217310

TI Emulsion **coating** compositions

PA Nippon Synthetic Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57205460	A2	19821216	JP 1981-89088	19810609
	JP 63013461	B4	19880325		
PRAI	JP 1981-89088		19810609		

AB Emulsion **coating** materials were prepared containing **poly(vinyl alc.)** acetoacetate (I) [**39290-68-1**] as emulsifier. For example, a 44.8%-solids **poly(vinyl acetate)** emulsion was prepared by emulsion polymerization in the presence of I. This emulsion had excellent storability at low temperature and freeze-thaw stability and formed films having excellent water resistance.

IC C09D005-02

CC 42-10 (**Coatings**, Inks, and Related Products)

ST **polyvinyl** acetoacetate emulsifier **coating**

IT Emulsifying agents

(**poly(vinyl alc.)** acetoacetate, for vinyl acetate polymer **coating** materials)

IT Fatty acids, esters

RL: USES (Uses)

(branched, vinyl esters, polymers with vinyl acetate, manufacture of, for emulsion **coatings**, emulsifiers for)

IT Polymerization

(emulsion, of vinyl acetate, emulsifying agents for)

IT **Coating** materials

(emulsion, vinyl acetate polymers, emulsifiers for manufacture of, **poly(vinyl alc.)** acetoacetate as)

IT 108-05-4DP, polymers with branched fatty acid vinyl esters 9003-07-0P
10126-68-8P 24937-78-8P 25067-01-0P 25068-38-6P 25085-46-5P
25767-47-9P

RL: TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**coatings**, emulsion, emulsifiers for manufacture of)

IT **39290-68-1**

RL: USES (Uses)

(emulsifiers, for vinyl acetate polymer **coating** materials)

IT **39290-68-1**

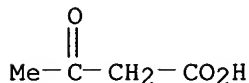
RL: USES (Uses)

(emulsifiers, for vinyl acetate polymer **coating** materials)

RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

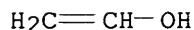
CM 1

CRN 541-50-4
CMF C4 H6 O3

CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

CRN 557-75-5
CMF C2 H4 O

L17 ANSWER 30 OF 30 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1974:554711 HCAPLUS

DN 81:154711

TI **Coating** electrically nonconductive articles

IN Wilhelm, Hans; Marx, Matthias

PA BASF A.-G.

SO Ger., 4 pp.

CODEN: GWXXAW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1621800	A	19700820	DE 1966-B86398	19660329
	DE 1621800	B2	19740214		
	DE 1621800	C3	19741010		
	GB 1172727	A	19691203	GB 1967-1172727	19670328
PRAI	DE 1966-B86398	A	19660329		

AB The title articles are coated with an elec.-conducting **coating**, on which is deposited by electrophoresis an aqueous ionic solution or dispersion

and the deposited **coating** is hardened. Thus 45:215:30 butanediol acetoacetate acrylate-tert-butyl acrylate-N,N-dimethylaminoethyl acrylate polymer is prepared by polymerization of the monomers

at 90-6.deg. in presence of azobisisobutyronitrile with stirring and cooling, neutralization with AcOH to give the salt [52926-32-6], and slow dilution with 900 parts water. A PVC [9002-86-2] film with an iron [7439-89-6] **coating** (cathode) is suspended in the solution and a **coating** deposited during 1 min at 70 V, the coated foil rinsed with water, immersed briefly in a Et3N-aqueous HCHO solution and

hardened 66 min at 60.deg.. The **coating**, insol. in aqueous and organic solvents, has outstanding corrosion resistance toward dilute aqueous alkali or salt solns.

IC B44D
 CC 42-7 (**Coatings**, Inks, and Related Products)
 ST **coating** electrophoretic polyacrylate; corrosion prevention polyacrylate **coating**
 IT **Coating** materials
 (electrophoretic, of iron-coated PVC with polyacrylate salts)
 IT 7439-89-6, uses and miscellaneous
 RL: USES (Uses)
 (PVC coated with, electrophoretic **coating** of, corrosion prevention by)
 IT **9002-86-2**
 RL: USES (Uses)
 (**coating** process for elec. nonconductive particles from)
 IT **52926-32-6**
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**coatings**, electrophoretic, for iron-coated PVC)
 IT **9002-86-2**
 RL: USES (Uses)
 (**coating** process for elec. nonconductive particles from)
 RN 9002-86-2 HCAPLUS
 CN Ethene, chloro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

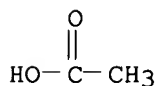
CRN 75-01-4
 CMF C2 H3 Cl

$\text{H}_2\text{C}=\text{CH}-\text{Cl}$

IT **52926-32-6**
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**coatings**, electrophoretic, for iron-coated PVC)
 RN 52926-32-6 HCAPLUS
 CN Butanoic acid, 3-oxo-, monoester with butanediol mono-2-propenoate, polymer with 2-(dimethylamino)ethyl 2-propenoate and 1,1-dimethylethyl 2-propenoate, acetate (9CI) (CA INDEX NAME)

CM 1

CRN 64-19-7
 CMF C2 H4 O2

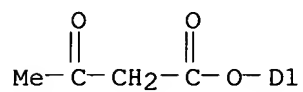
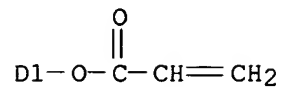
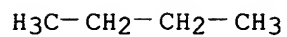


CM 2

CRN 52926-31-5
 CMF (C11 H16 O5 . C7 H13 N O2 . C7 H12 O2)x
 CCI PMS

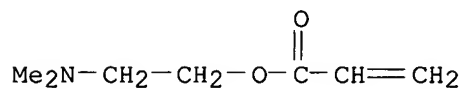
CM 3

CRN 52926-30-4
CMF C11 H16 O5
CCI IDS



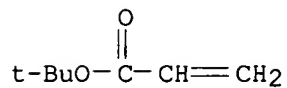
CM 4

CRN 2439-35-2
CMF C7 H13 N O2



CM 5

CRN 1663-39-4
CMF C7 H12 O2



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